1912

General Catalogue 1912

Utah State University

CATALOGUE

OF THE

AGRICULTURAL COLLEGE OF UTAH

FOR

1912-1913

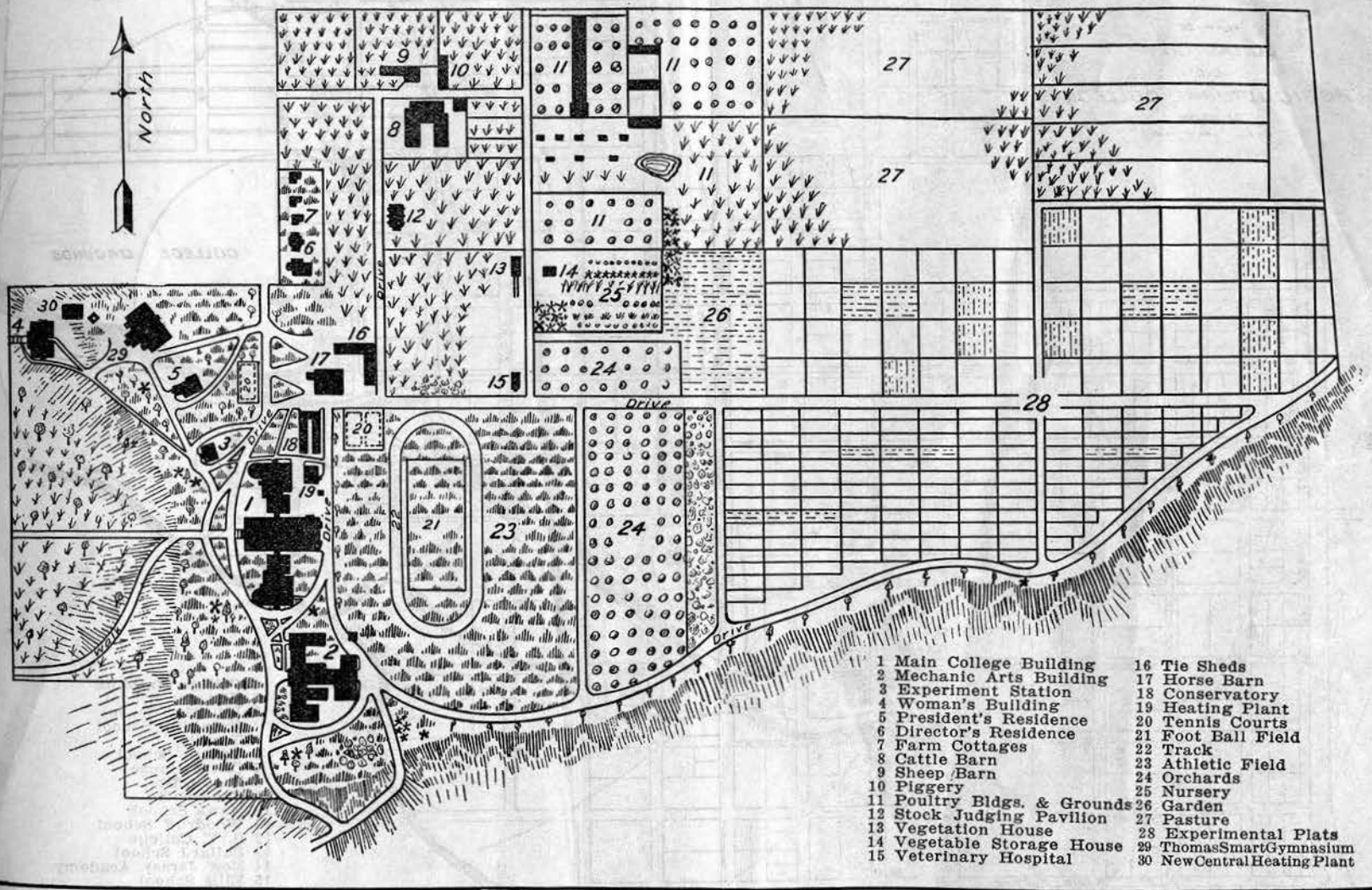
With List of Students for 1911-1912

LOGAN, UTAH

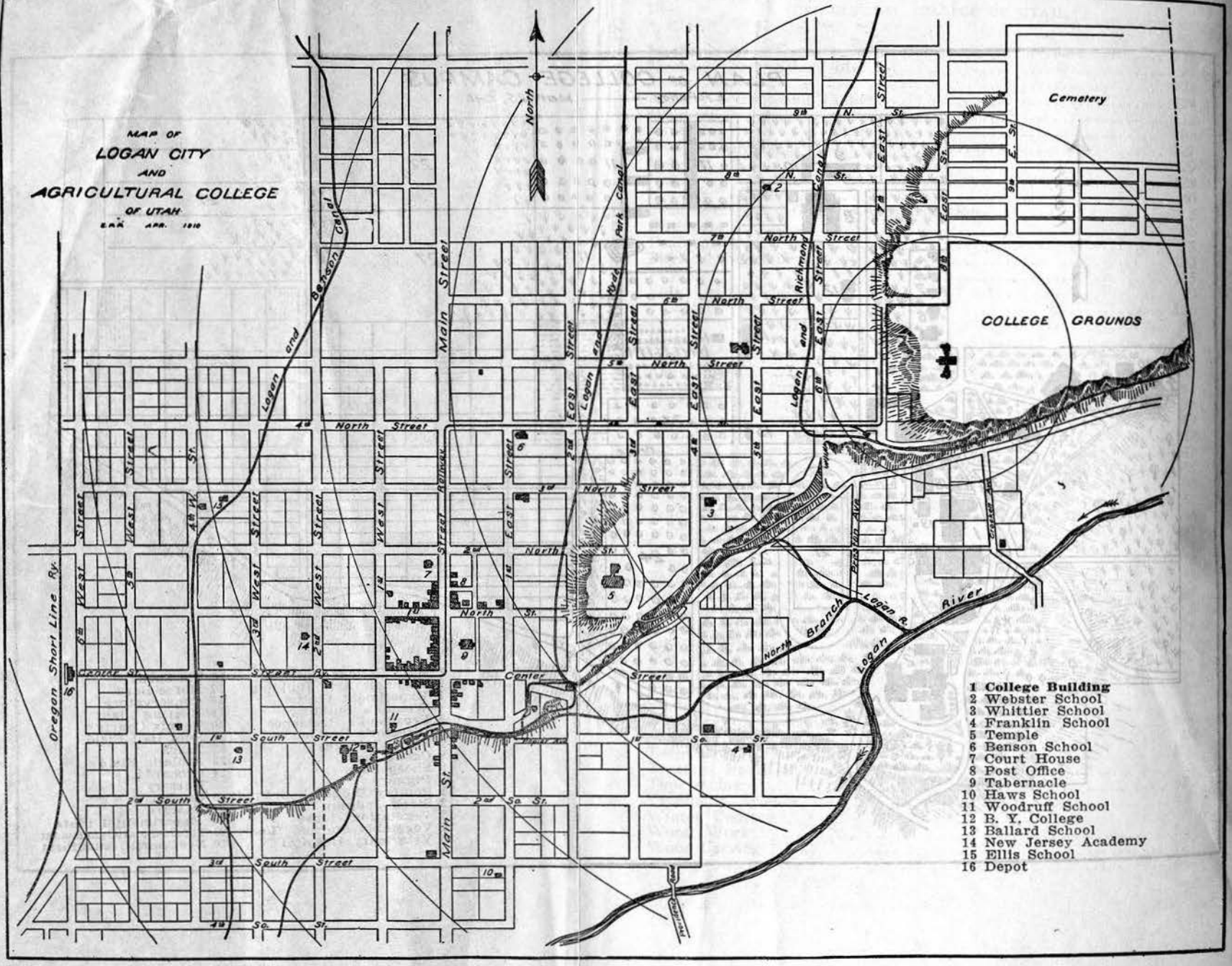
Published by the College,
July, 1912

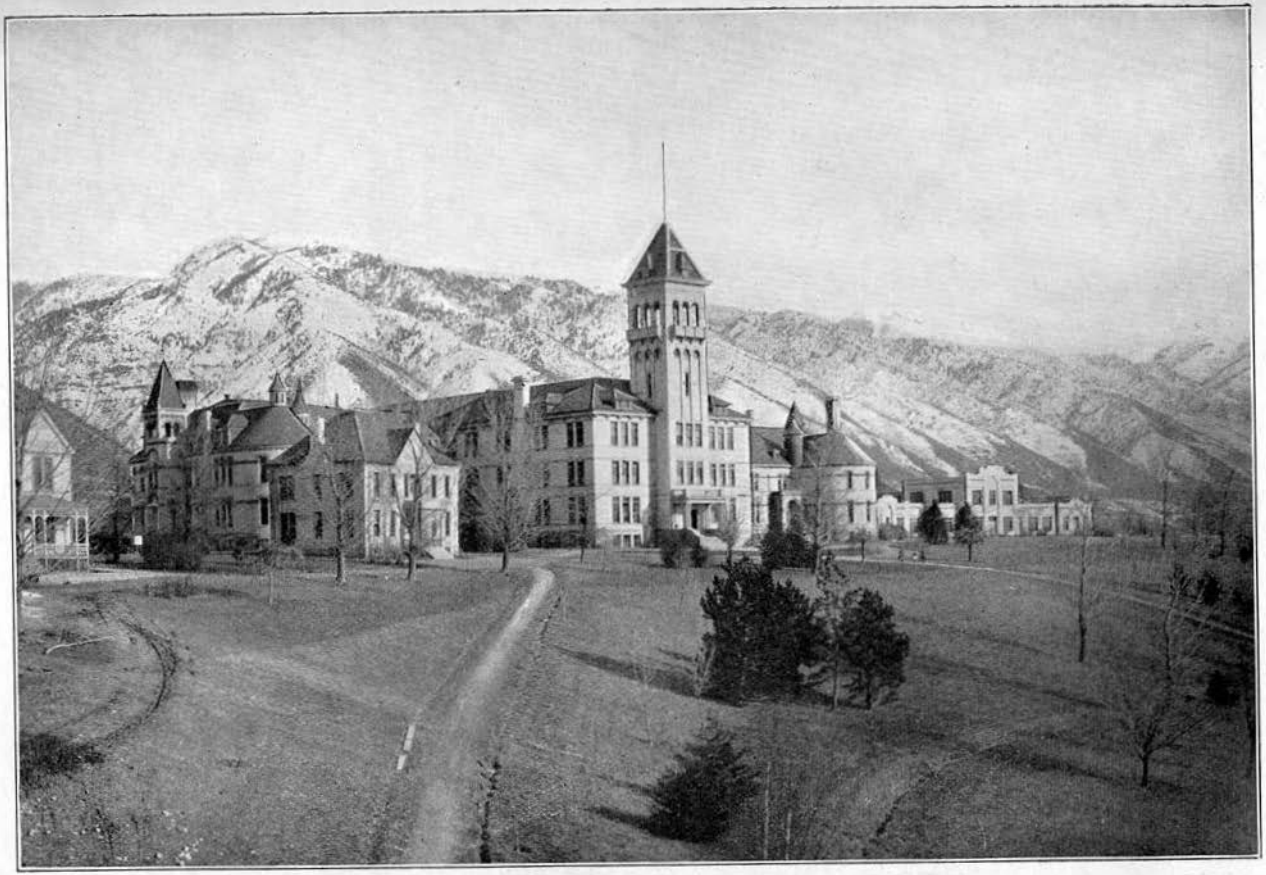
PLAN OF COLLEGE CAMPUS

E.P. Pulley ——— Mar. 25, 1910.



1 Main College Building
2 Mechanic Arts Building
3 Experiment Station
4 Woman's Building
5 President's Residence
6 Director's Residence
7 Farm Cottages
8 Cattle Barn
9 Sheep Barn
10 Piggery
11 Poultry Bldgs. & Grounds
12 Stock Judging Pavilion
13 Vegetation House
14 Vegetable Storage House
15 Veterinary Hospital
16 Tie Sheds
17 Horse Barn
18 Conservatory
19 Heating Plant
20 Tennis Courts
21 Foot Ball Field
22 Track
23 Athletic Field
24 Orchards
25 Nursery
26 Garden
27 Pasture
28 Experimental Plats
29 Thomas Smart Gymnasium
30 New Central Heating Plant


MAP OF
LOGAN CITY
AND
AGRICULTURAL COLLEGE
OF UTAH
E.M.K. APR. 1910
North
Cemetery
COLLEGE GROUNDS
Main Street
Logan and Benson Canal
Hyde Park Canal
Richmond Street
East Logan Canal
Oregon Short Line Ry.
North Branch Logan R.
Logan River
Center Street
1st South Street
2nd South Street
3rd South Street
Main St.
1 College Building
2 Webster School
3 Whittier School
4 Franklin School
5 Temple
6 Benson School
7 Court House
8 Post Office
9 Tabernacle
10 Haws School
11 Woodruff School
12 B. Y. College
13 Ballard School
14 New Jersey Academy
15 Ellis School
16 Depot



MAIN BUILDING.

A BIRDSEYE VIEW OF SOME OF THE COLLEGE RESIDENCES, THE BARNS, AND POULTRY PLANT.

1912.

JANUARY

S	M	T	W	T	F	S
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7	8	9	10	11	12	13
14	15	16	17	18	19	20
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FEBRUARY

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MARCH

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APRIL

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JULY

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AUGUST

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1913.

JANUARY

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MARCH

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APRIL

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MAY

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JUNE

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JULY

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AUGUST

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24	25	26	27	28	29	30
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SEPTEMBER

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OCTOBER

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26	27	28	29	30	31	..
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NOVEMBER

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23	24	25	26	27	28	29
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DECEMBER

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14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	..	..	..
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College Calendar, 1912–1913.

FIRST TERM.

1912.

September 24, Tuesday:	Entrance examinations. Registration of former students, and of new students admitted on certificates.
September 25, Wednesday:	Classes organized.
November 28, Thursday:	Thanksgiving Day.
December 21, Saturday:	Christmas recess begins.

1913.

January 7, Tuesday:	Instruction resumed.
February 1, Saturday:	First term ends.

SECOND TERM.

February 4, Tuesday:	Second term begins.
February 12, Wednesday:	Lincoln's Birthday.
February 22, Saturday:	Washington's Birthday.
April 15, Tuesday:	Arbor Day.
June 1, Sunday:	Baccalaureate sermon.
June 2, Monday:	Class Day.
June 3, Tuesday:	Commencement. Alumni Banquet and Ball.
June 7, Saturday:	Summer vacation begins.

ANNUAL FARMERS' ROUND-UP.

U. A. C., LOGAN.

Monday, January 27, to Saturday, February 8, 1913.

AT RICHFIELD.

Thursday, February 13, to Saturday, February 22, 1913.

Board of Trustees.

LORENZO N. STOHL.....Brigham
THOMAS SMART .....Logan
JOHN Q. ADAMS.....Logan
ELIZABETH C. McCUNE.....Salt Lake City
J. W. N. WHITECOTTON.....Provo
MATHONIHAH THOMAS .....Salt Lake City
JOHN DERN .....Salt Lake City
JOHN C. SHARP.....Salt Lake City
J. A. HYDE.....Nephi
ANGUS T. WRIGHT.....Ogden
J. M. PETERSON.....Richfield
C. S. TINGEY, Secretary of State, *Ex-officio*.....Salt Lake City

OFFICERS OF THE BOARD OF TRUSTEES.

LORENZO N. STOHL.....President
ELIZABETH C. McCUNE.....Vice President
JOHN T. CAINE, Jr.....Recording Secretary and Auditor
JOHN L. COBURN.....Financial Secretary
ALLAN M. FLEMING.....Treasurer

STANDING COMMITTEES OF THE BOARD OF TRUSTEES.

Executive Committee.
Lorenzo N. Stohl, Mrs. A. W. McCune and Thomas Smart

Committee on Agriculture.
John Q. Adams, John C. Sharp and Angus T. Wright

Committee on Mechanic Arts.
John Dern, J. W. N. Whitecotton and Angus T. Wright

Committee on Home Economics.
Mrs. A. W. McCune, John Dern and J. M. Peterson

Committee on Commerce.
Angus T. Wright, J. W. N. Whitecotton and Mrs. A. W. McCune.

Committee on Experiment Station.
J. A. Hyde, John Q. Adams and J. M. Peterson.

Committee on Faculty and Courses of Study.
J. W. N. Whitecotton, Mathonihah Thomas and Mrs. A. W. McCune.

Committee on Livestock.
John C. Sharp, Thomas Smart and Mathonihah Thomas.

Extension Work.
Mathonihah Thomas, John Q. Adams and J. A. Hyde

Buildings and Grounds.
Thomas Smart, John Q. Adams and John Dern.

Finance.
J. M. Peterson, J. C. Sharp and C. S. Tingey.

Legislation.
C. S. Tingey, John Dern and J. A. Hyde.

Auditor.
J. W. N. Whitecotton.

Officers of Administration and Instruction.†

The College Faculty.

(Arranged in Groups in the Order of Seniority of Appointment.)

JOHN ANDREAS WIDTSOE, A. M., Ph. D.,
PRESIDENT.

WILLARD SAMUEL LANGTON, A. M.,*
Professor of Mathematics.

LEWIS ALFORD MERRILL, B. S.,
DIRECTOR, EXTENSION DIVISION.

ELMER DARWIN BALL, M. Sc., Ph. D.
DIRECTOR, EXPERIMENT STATION AND DIRECTOR, SCHOOL OF AGRICULTURE.

GEORGE WASHINGTON THATCHER,
Professor of Music.

GEORGE THOMAS, A. M., Ph. D.,
DIRECTOR, SCHOOL OF COMMERCE.
Professor of Economics.

*On leave of absence.

†The College Council consists of the President, the Registrar, *(ex-officio)*, all members of the Faculty of the rank of professor, associate professor or assistant professor.

WILLIAM PETERSON, B. S.,
Professor of Geology.

HYRUM JOHN FREDERICK, D. V. M.,
Professor of Veterinary Science.

FRANK RUSSELL ARNOLD, A. M.,
Professor of Modern Languages.

JOSEPH WILLIAM JENSEN, S. B.,
Professor of Irrigation Engineering.

JAMES CHRISTIAN HOGENSON, M. S. A.,
Agronomist, Extension Division.

CHRISTIAN LARSEN, A. M.,
Professor of English.

JOHN THOMAS CAINE, B. S.,
AUDITOR, SECRETARY OF THE FACULTY AND BOARD OF TRUSTEES.

EDWARD GAIGE TITUS, M. S., Sc. D.,
Professor of Zoology and Entomology.

ROBERT STEWART, Ph. D.,
ASSISTANT DIRECTOR, EXPERIMENT STATION.
Professor of Chemistry.

JOHN THOMAS CAINE III., M. S. A.,
Professor of Animal Husbandry.

FRANKLIN LORENZO WEST, Ph. D.
Professor of Physics.

CLAYTON TRYON TEETZEL, LL. B.,
Professor of Physical Education.

ELLEN ALDEN HUNTINGTON, A. M.,
DIRECTOR, SCHOOL OF HOME ECONOMICS.
Professor of Home Economics.

WILBERT S. DREW, A. M.*
DIRECTOR, SCHOOL OF MECHANIC ARTS.
Professor of Farm Mechanics.

LEON D. BATCHELOR, M. S., Ph. D.
Professor of Horticulture.

ELMER GEORGE PETERSON, A. M., Ph. D.,
Professor of Physiology and Bacteriology.

FRANKLIN STEWART HARRIS, Ph. D.,
DIRECTOR, SCHOOL OF AGRICULTURAL ENGINEERING.
Professor of Agronomy.

C. NEPHI JENSEN, M. S. A., Ph. D.
Professor of Botany and Plant Pathology.

ROBERT J. BINFORD, First Lieutenant, Infantry, U. S. A.
Professor of Military Science and Tactics.

BLANCHE COOPER, B. S.,
Associate Professor of Domestic Science.

JOSEPH EAMES GREAVES, M. S., Ph. D.,
Associate Professor of Physiological Chemistry.

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*On leave of absence.

CALVIN FLETCHER, B. Pd.,*
Associate Professor of Art.

W. ERNEST CARROLL, M. S.,
ASSISTANT DIRECTOR, SCHOOL OF AGRICULTURE.
Associate Professor of Animal Husbandry.

RHODA BOWEN COOK,
Assistant Professor of Domestic Arts.

N. ALVIN PETERSON, A. B.,*
Assistant Professor of English.

ELIZABETH CHURCH SMITH, B. L.,
LIBRARIAN.

CHARLES WALTER PORTER, A. M.,
Assistant Professor of Chemistry.

GEORGE B. HENDRICKS, A. M.,
Assistant Professor of Economics.

GEORGE M. TURPIN, B. S.,
Assistant Professor of Poultry Husbandry.

PARLEY ERASTUS PETERSON, A. B.,
Assistant Professor of Accounting.

GEORGE C. JENSEN, A. B.,
Assistant Professor of Modern Languages.

AUGUST J. HANSEN, B. S.,
Assistant Professor of Mechanic Arts.

---

*On leave of absence.

JONATHAN SOCKWELL POWELL,*
Assistant Professor of Art.

FLORENCE MAY BROWN, A. B.,
Assistant Professor of Domestic Science.

FRANKLIN D. DAINES, A. M.,
Assistant Professor of History.

RAY BENEDICT WEST., B. S. C. E.,
Assistant Professor of Agricultural Engineering.

JOHN L. COBURN, B. S.,
FINANCIAL SECRETARY.

EDWARD PARLEY PULLEY, B. S.,
Instructor in Machine Work.

SARA HUNTSMAN, B. S.,
Instructor in English.

AARON NEWEY, B. S.,
Instructor in Forging.

CHARLOTTE KYLE, A. M.,
Instructor in English.

LOUIE E. LINNARTZ,
Instructor in Music.

W. L. WALKER, B. S.,*
Instructor in Mathematics.

---

*On leave of absence.

C. T. HIRST, B. S.,
Instructor in Chemistry.

KATHERINE CLARK, A. B.,
Instructor in English.

AMELIA MANNING, B. S.,
Instructor in English.

CANUTE PETERSON, B. S.,
Instructor in Stenography and Typewriting.

WILLIAM SPICKER,
Instructor in Violin.

NETTIE SLOAN,
Instructor in Piano.

ALBERT E. BOWMAN, B. S.,
Instructor in Agronomy.

D. EARL ROBINSON, B. S.,
Instructor in History.

CORAL KERR, B. S.,
Instructor in Domestic Arts.

WALLACE MACFARLANE, B. S.,*
Instructor in Mathematics.

WILLIAM L. QUAYLE B. S.,
Instructor in Mathematics.

---

*On leave of absence.

LUTHER M. WINSOR, B. S.,
Instructor in Irrigation, Extension Division.

WILLIAM THORNLEY,
Instructor in Horse Shoeing.

JOHN H. MOSER,
Instructor in Art.

LEAH IVINS, B. S.,
Instructor in Home Economics, Extension Division.

MATHEW A. NELSON, B. S.,
Instructor in Zoology.

A. C. CARRINGTON,
PRESIDENT'S SECRETARY.

MARY E. JOHNSON, A. B.,
Instructor in Physical Education for Women.

JOSEPH D. HOWELL,
REGISTRAR.

LEGRANDE HUMPHERYS, B. S.,
Instructor in Mathematics.

HOWARD SCHWEITZER, B. S.,
Instructor in Horticulture.

ALICE A. DUNFORD, B. S.,
Instructor in Domestic Arts.

GERTRUDE M. McCHEYNE, B. S.,
Instructor in Home Economics, Extension Division.

IDA MAY SAVAGE,
Instructor in Art.

HATTIE SMITH,
Assistant in Library.

S. L. BINGHAM,
Assistant in Dairying.

CHARLES LEO MERRILL, B. S.,
Assistant in Agronomy.

CHARLES BATT,
Superintendent of Grounds, Water Works and Heating and Lighting Plant.

RASMUS OLUF LARSEN,
Superintendent of Buildings.

Experiment Station Staff.

E. D. BALL, M. Sc., Ph. D.,
Director and Entomologist.

L. A. MERRILL, B. S.,
Agronomist in Charge of Arid Farms.

H. J. FREDERICK, D. V. M.,
Veterinarian.

JOHN T. CAINE, III, M. S. A.,
Animal Husbandman.

ROBERT STEWART, Ph. D.,
Assistant Director and Chemist.

E. G. TITUS, M. S., Sc. D.,
Entomologist.

L. D. BATCHELOR, M. S., Ph. D.,
Horticulturist.

G. M. TURPIN, B. S.,
Poultryman.

F. S. HARRIS, Ph. D.,
Agronomist.

F. L. WEST, Ph. D.,
Meteorologist.

C. N. JENSEN, M. S., Ph. D.,
Plant Pathologist.

J. E. GREAVES, M. S., Ph. D.,
Associate Chemist.

ERNEST CARROLL, M. S.,
Associate Animal Husbandman.

C. T. HIRST, B. S.,
Assistant Chemist.

A. B. BALLANTYNE, B. S.
Superintendent Southern Utah Experiment Farm.

A. E. BOWMAN, B. S.,
Assistant Agronomist.

L. M. WINSOR, B. S.,
Assistant Irrigation Engineer.

M. A. NELSON, B. S.,
Assistant Entomologist.

W. L. QUAYLE, B. S.,
Assistant Irrigation Engineer.

H. J. WEBB, B. S.,
Assistant Entomologist.

HOWARD SWEITZER, B. S.,
Assistant Horticulturist.

A. D. ELLISON, B. S.,
Foreman Nephi Experiment Farm.

C. L. MERRILL, B. S.,
Assistant Agronomist.

Assistant Animal Husbandman.

Superintendent Panguitch Farm.

WILLARD GARDNER, B. S.,
Clerk and Librarian.

IN CHARGE OF COOPERATIVE INVESTIGATIONS WITH U. S. DEPARTMENT OF AGRICULTURE.

W. W. McLAUGHLIN, B. S.,
Irrigation Engineer.

P. V. CARDON, B. S.,
Agronomist.

R. A. HART, B. A.,
Drainage Engineer.

Extension Division Staff.

PRESIDENT JOHN ANDREAS WIDTSOE.
PROFESSOR LEWIS ALFORD MERRILL.
PROFESSOR ELMER DARWIN BALL.
PROFESSOR WILLIAM PETERSON.
PROFESSOR HYRUM JOHN FREDERICK.
PROFESSOR JAMES CHRISTIAN HOGENSON.
PROFESSOR EDWARD GAIGE TITUS.
PROFESSOR ROBERT STEWART.
PROFESSOR JOHN T. CAINE, III.
PROFESSOR ELLEN ALDEN HUNTINGTON.
PROFESSOR LEON D. BATCHELOR.
PROFESSOR ELMER GEORGE PETERSON.
PROFESSOR FRANKLIN STEWART HARRIS.
PROFESSOR C. NEPHI JENSEN.
ASSOCIATE PROFESSOR BLANCHE COOPER.
ASSISTANT PROFESSOR GEORGE M. TURPIN.
ASSISTANT PROFESSOR W. ERNEST CARROLL.
LUTHER MURKINS WINSOR.
LEAH IVINS.
GERTRUDE M. McCHEYNE.

Standing Committees.

1912-1913.

The President of the College is *ex officio* a member of each standing committee.

1. *School of General Science.*—Professors J. W. Jensen, Thatcher, F. L. West, E. G. Peterson, Daines.

2. *High School.*—Professors Wm. Peterson, P. E. Peterson, Mrs. Clark.

3. *Graduation.*—Professors Arnold, F. L. West, Batchelor, Cooper, C. N. Jensen.

4. *College Publications.*—Professors Larsen, Harris, Arnold, Miss Kyle, Miss Manning.

5. *Attendance and Scholarship.*—Professors Thomas, William Peterson, Caine, F. L. West, Porter, Binford, Miss Kyle.

6. *Student Affairs.*—Professors Caine, Frederick, Miss Smith, Carroll, Miss Huntsman, Miss Kerr.

7. *Athletics.*—Professors Teetzel, Ball, Caine III, Binford, Coburn.

8. *Publicity.*—Professors E. G. Peterson, Merrill, Harris, Huntington.

9. *Exhibits.*—Professors Titus, Caine III, Cook, Porter, Turpin, Hansen, Miss Brown.

10. *Debating.*—Professors Hendricks, Thomas, Larsen, Titus, Carroll, Daines.

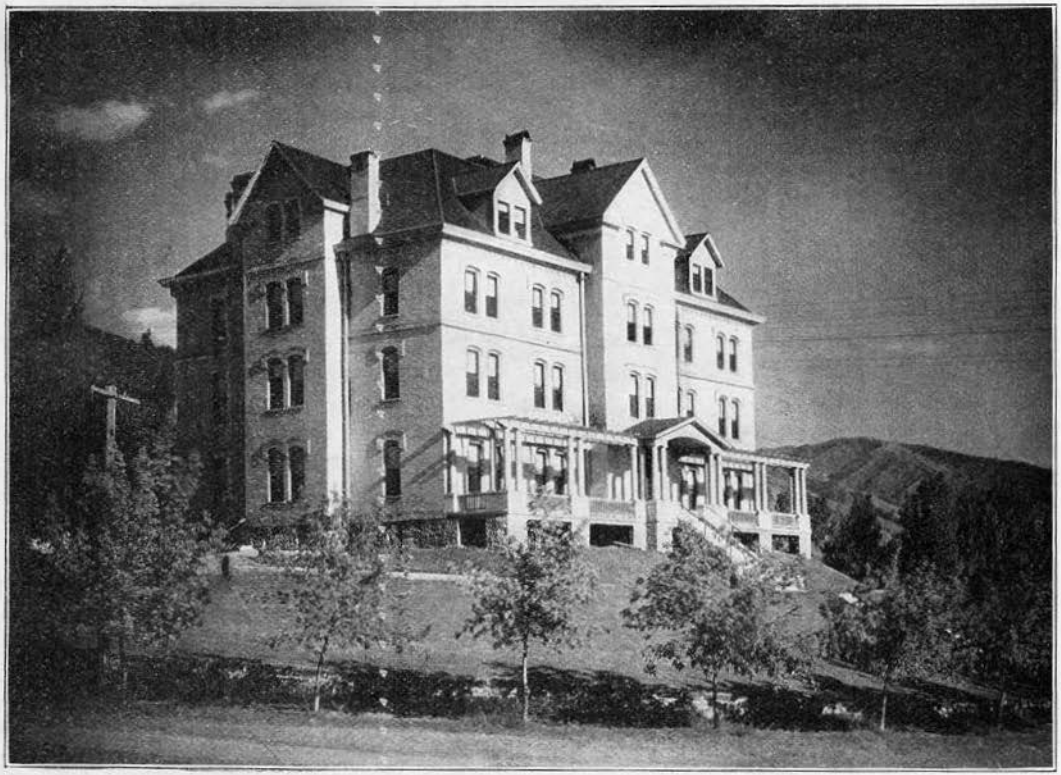
11. *Entrance Requirements.*—Professors Greaves, R. B. West, G. C. Jensen.

12. *Student Employment.*—Professors Stewart, Frederick, Caine III, Cooper, Hansen, Mr. Newey, Mr. Pulley.

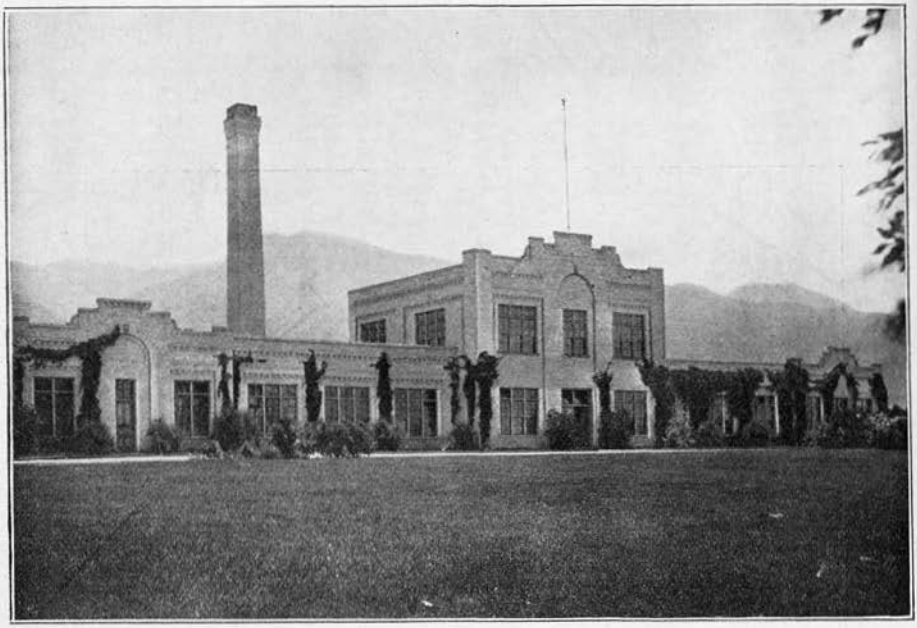
13. *Student Body Organization.*—Professors Ball, Thomas, Huntington.

14. *Graduate Employment.*—Mr. Carrington, Professors Ball, Thomas, J. W. Jensen, Huntington.

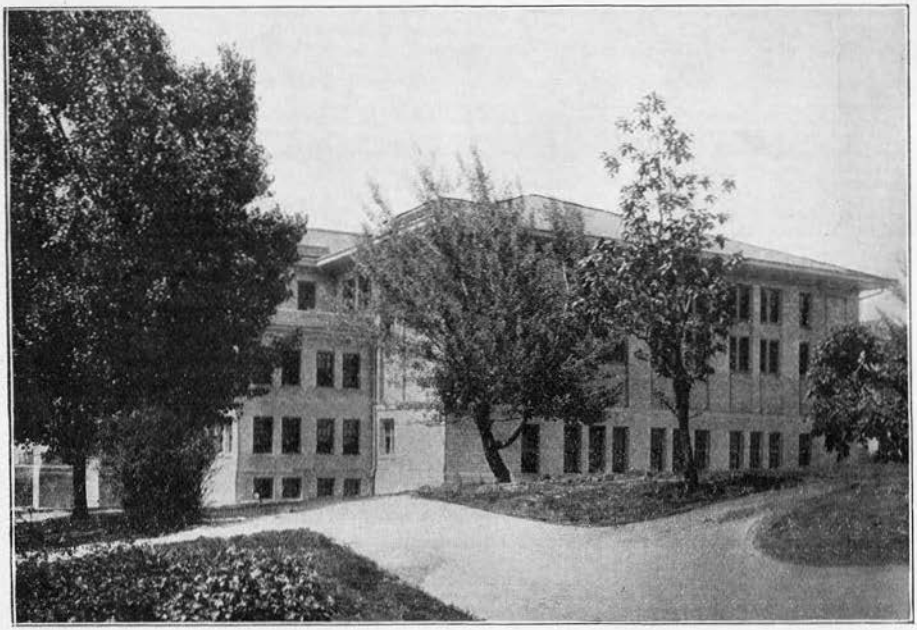
15. *Summer School.*—Professors Thomas, Larsen, F. L. West, Porter, C. N. Jensen.



WOMAN'S BUILDING.



MECHANIC ARTS BUILDING.



THE THOMAS SMART GYMNASIUM.

AGRICULTURAL COLLEGE OF UTAH.

General Information.

The Agricultural College of Utah is a part of the public school system of the State. It comprises six different schools:—the School of Agriculture, the School of Home Economics, the School of Agricultural Engineering, the School of Commerce, the School of General Science, and the School of Mechanic Arts; also the Agricultural Experiment Station and the Extension Division, both of which are important departments of the institution. The following pages contain an account of the organization, purpose, and equipment of the College, together with the character and extent of the work offered.

HISTORY.

The Agricultural College of Utah was founded in 1888, when, on March 8th, the Legislative Assembly accepted the terms of the national law passed by Congress on July 2d, 1862. Under this Act of Congress, and the Enabling Act providing for the admission of Utah to the Union, 200,000 acres were granted to the State from the sale of which there should be established a perpetual fund, the interest to be used in maintaining the College.

Under the Hatch Act, approved in 1887, the State receives $15,000 annually for the Experiment Station. Under the Morrill Act of 1890 the State receives $25,000 annually for instruction in the Agricultural College. Under the Adams Act of 1906 the State will ultimately receive an additional $15,000 annually for re-

search work by the Experiment Station. Under the Nelson Act of 1907, the Morrill Act was so amended that the State will receive an increase of $5,000 annually, until the annual amount so received reaches $50,000 per year.

These various federal appropriations, together with the annual income from the land-grant fund, represent the income received from the general government, but as most of these funds must be used in accordance with the law for specific purposes, the institution is dependent on State appropriations for funds with which to carry on the work of instruction, etc. These needs have been generously met in the past by the various Legislative Assemblies of the State. In 1888 the sum of $25,000 was appropriated for buildings and the County of Cache and the City of Logan gave one hundred acres of land on which to build the College. Since that time the State has, on various occasions, appropriated sufficient funds to erect and maintain in order all the buildings described in a later section, besides providing largely for instruction.

By recent legislative action the so-called "Mill Tax" has placed the College on a more satisfactory basis. Under this act, the College receives annually 28.34 per cent of 28 per cent of 4.5 mills of the total valuation of the State, thereby assuring a more stable appropriation from year to year. The Extension appropriation has been raised to $10,000 and the total amount for the use of the Experiment Station is increased to $15,000 a year. The act providing state aid for high schools will in a few years so increase the number of efficient high schools and consequently the number of high school graduates, that the college attendance will unquestionably show a marked increase.

In September, 1890, the institution was first opened for the admission of students, degree courses being offered in Agriculture, Domestic Arts, Civil Engineering, Mechanic Arts, and Commerce; a Preparatory Course and short courses in Agriculture and Engineering were also given. Since that time many improvements have been made in the courses; some have been abandoned, several

special high school courses in Commerce, Mechanic Arts, and Home Economics have been added, the standard of the College work has been raised, and in 1903, the Board of Trustees established the School of Agriculture, the School of Home Economics, the School of Mechanic Arts, the School of Commerce, and the School of General Science. By the Act of 1911 the work in Agricultural Engineering has been restored, and college courses in this line of work are now offered. By action of the Board of Trustees the High School Department of the College will be gradually eliminated. The first year high school work will not be given in 1913-1914. Both the first and the second years will be discontinued in 1914-1915.

GOVERNMENT.

The government of the College is vested primarily in the Board of Trustees, and, under their control, the four other administrative bodies,—the Directors' Council, the College Council, the College Faculty, and the Staff of the Experiment Station. These, in their several capacities, determine the policy and maintain the efficiency of the institution.

THE BOARD OF TRUSTEES consists of thirteen members, appointed by the Governor with the approval of the State Senate. This Board assumes the legal responsibility of the institution, cares for its general interests, and directs its course by the enactment of all necessary by-laws and regulations. Vested in it is the power to establish professorships and to employ the instructing force and other officers of the College.

Between sessions, the power of the trustees rests with an executive committee, whose actions are referred to the Board for their approval. Another committee is concerned with the funds and accounts of the College, while a third has general charge of all buildings and repairs throughout the institution. In addition to these, there are committees, largely advisory, having to do with

the employment and service of College officers, and with the work of particular departments.

THE DIRECTORS' COUNCIL consists of the President, the heads of the schools and the Director of Extension Division. This body has immediate supervision of the instruction and discipline in all the various schools. It constitutes a permanent executive and administrative committee of the College Council and Faculty.

THE COLLEGE COUNCIL consists of the President of the College, the Registrar, and the professors, the associate professors, the assistant professors, and the librarian. All important questions of discipline and policy are decided by this body.

THE COLLEGE FACULTY includes the President, the professors, the associate professors, the assistant professors, the librarian, the instructors, and the assistants. As an administrative body it is concerned with the ordinary questions of methods and discipline and with various matters pertaining to the general welfare of the College. Through its standing committees it is in intimate contact with the student body and with the life and interests of the college community.

THE STANDING COMMITTEES have delegated to them the immediate direction of all the various phases of college life, such as the enrollment and progress of students in the various schools, and the general direction of the work there carried on. The conduct of the student in his college home and his regularity in performing college duties; the publications of the College and the students; the interests of the students on the athletic field, in the amusement halls, and in their various organizations,—all these things are within the province of appropriate committees consisting largely of members of the council.

THE EXPERIMENT STATION STAFF consists of the President of the College, the Director of the Station, and the chiefs, with their assistants of the departments of Agronomy, Horticulture, Animal Husbandry and Dairying, Entomology, Chemistry, Irrigation, Poultry Culture, and Veterinary Science. This body is

employed in the investigation of problems peculiar to agriculture in this portion of the country, the purpose being to improve conditions and results. It is further responsible for the circulation, through private correspondence and regular bulletins, of such information as is of practical value to the farming communities.

THE STUDENTS. The College is maintained at public expense for the public good. The students, therefore, are under a peculiar obligation to perform faithfully all their duties to the State, the institution, and the community. Most important of these is an active interest in all that concerns the moral and intellectual welfare of the College. Regularity of attendance, faithful attention to studies, and exemplary personal conduct are insisted upon at all times, and the administrative bodies of the College are fully empowered to secure these results.

POLICY.

It is the policy of the Agricultural College of Utah, in accordance with the spirit of the law under which it is organized, to provide a liberal, thorough, and practical education. The two extremes in education, empiricism and the purely theoretical, are avoided, the practical being based upon, and united with, the thoroughly scientific. In addition to the practical work of the different courses, students are thoroughly trained in the related subjects of science, and in mathematics, history, English, and modern languages. While the importance of practical training is emphasized, the disciplinary value of education is kept constantly in view. The object is to inculcate habits of industry and thrift, of accuracy and reliability, and to foster all that makes for right living and good citizenship.

Under this general policy, the special purpose of the Agricultural College of Utah is to be of service in the upbuilding of the State of Utah, and the Great West to which it belongs. The instruction in Agriculture, therefore, deals with the special prob-

lems relating to the conquest of the great areas of unoccupied lands, the proper use of the water supply, the kinds of crop or live stock produced, which in Utah may be made pre-eminent; in Mechanic Arts, the most promising trades are pointed out, and they are taught in a manner to meet the needs of the State; in Commerce the present commercial conditions of the State are studied and the principles and methods to be applied in the commercial growth of Utah are given thorough investigation. The women who study Domestic Science are taught house-keeping and right living from the point of view of prevailing Utah conditions.

The dominating spirit of the policy of the Agricultural College of Utah is to make the common work of the world—the work that most men and women must do—both profitable and pleasant. The motto of the College is, Labor is Life.

LOCATION, BUILDINGS AND GROUNDS.

The Agricultural College of Utah is in Logan, the county seat of Cache County, one of the most prosperous agricultural counties in the State. The city has a population of about 7,000; it is noted for its freedom from vice, is quiet, orderly, clean and generally attractive, with neat homes, good, substantial public buildings, electric lights, a sewer system, and a water system. Cement pavements and an excellent electric street-car line both recently completed, extend from the Station to the College. The citizens are thrifty and progressive. The College is beautifully situated on a broad hill overlooking the city, one mile east of Main street, and commands a view of the entire valley and of its surrounding mountain ranges. The beauty of the location is perhaps unsurpassed by that of any other college in the country. A few hundred yards to the south is the Logan River. A mile to the east is a magnificent mountain range and a picturesque canyon. In other directions are towns and farms covering the green surface of

Cache Valley, and distinctly visible through the clear atmosphere. The valley is a fertile, slightly uneven plain, 4,500 feet above sea level, about twelve by sixty miles in dimensions, almost entirely under cultivation and completely surrounded by the Wasatch Mountains. It is one of the most attractive and healthful valleys in the western region.

On this site the College now has nearly twenty buildings, all modern, all well lighted and well heated, and all carefully planned and constructed to meet the purpose for which each was intended.

The Main Building, of brick and stone, is 360 feet long, 200 feet deep in the central part, and four stories high. It contains the large auditorium, seating about 1,500; the administrative offices; the library; and all the various class rooms and laboratories except those of Mechanic Arts and Home Economics.

The Woman's Building, formerly the Dormitory, is a large four-story brick building fifty by eighty feet, situated at three minutes' distance from the Main Building on the north-west corner of the campus. Cement walks connect it with the other school buildings and with Main Street. It is one of the largest and best equipped structures devoted entirely to Domestic Science and Arts in the whole Inter-Mountain Region. It has automatic elevator service from the locker room and laundry in the basement to the spacious rooms on the fourth floor. On the first floor there are a large lecture room used for a class room and also for public lectures, a small class room and a kitchen-laboratory equipped with gas for individual work, a library, and an office. On the second floor are the second kitchen-laboratory, equipped with electricity for individual work, a small kitchen, a dining room, a chemical and a research laboratory. The third floor is devoted entirely to the Domestic Arts and contains the office, millinery room, sewing, dressmaking and fitting rooms with complete equipment. The fourth floor contains a rest room, class room, and a large room used for museum material and gymnasium work.

Through the munificent gift of the Honorable Thomas Smart, a member of the Board of Trustees, and the generous ap-

propriation of the State Legislature, provision was made for a new gymnasium on the College grounds. This gymnasium is now completed and ready for use during the coming year. It is adequately equipped with apparatus for conducting elementary and advanced courses in physical education. Besides large and well ventilated rooms for class exercises and for games, the gymnasium also contains separate rooms for girls' classes and boys' classes, apparatus for taking physical measurements, locker rooms, offices, shower baths, a swimming tank, etc.

That portion of the Main Building formerly used for gymnasium has been turned over to the Art Department and provides six large and well lighted studios.

The Experiment Station Building, a two-story brick structure 45 feet long and 35 feet wide, contains the offices of the station staff, a reading room, and a dark room for photographic work.

The Mechanic Arts Building is a one-story brick structure, with the exception of the central part, which is two stories high. It has a ground floor area of 16,600 square feet, divided into four groups of rooms, viz.: wood working department, machine shop, forging rooms, and draughting rooms. On the second floor are the Mechanic Arts Museum, blue-printing room, room for painting and staining, and a class room.

Two Conservatories, each 90 by 25 feet, divided into various compartments for the purpose of regulating the temperature, are used to supplement class work in botany, floriculture and horticulture.

The Veterinary Hospital, a two-story stone and frame structure, 18 by 42 feet, containing a well-equipped dispensary, operating room, and stalls for patients, gives ample room for all the work in veterinary medicine at present offered by the College.

Two years ago, a commodious, well-heated stock-judging pavilion was erected. Here the students in animal industry now carry on their work instead of being obliged, as in the past, to remain outdoors in all sorts of weather.

A central heating plant which will supply all the college buildings for years to come, is now under construction and will be completed this fall.

The barns. *The horse barn,* a wooden structure, 60 feet square, contains model sanitary stables for horses, storage divisions for hay, grain and seed, and rooms for carriages and wagons, farm implements, and machinery; also the farm foreman's room, and repair shop. A ten-horsepower electric motor furnishes power for grain threshing, feed grinding, and fodder shredding. *The cattle barn,* 106 feet by 104 feet, is provided with the most modern equipment throughout, including iron stalls, cement floors and mangers, etc. There are accommodations for seventy-five head of cattle; also hospital rooms, feed rooms, a milk room, a root cellar, and storage room for hay and grain. *The sheep barn,* 84 feet by 41 feet, has accommodations for seventy-five sheep, and storage room for feed. *The hog barn* is a wooden structure, 65 feet by 31 feet. It contains two feed rooms, a cook room, an abattoir, and twelve pens, each of which is provided with an outside run. This building accommodates sixty mature animals.

The Poultry Building covers 230 feet by 25 feet, with yards 100 feet wide on each side. The building is divided into two sections:—first, the brooder section, with a capacity for about one thousand chicks; second, the experimental section, with a capacity for over five hundred hens. This section is divided into thirty-two pens; it is shut off from the public and used for conducting experiments on the different questions of poultry culture. The building is heated by a hot water system. In the front part are an office, a feed and weigh room, a store room, and a sleeping apartment.

A modern Incubator Cellar has recently been provided which is well equipped with the latest incubators of different makes, egg distributing and turning tables, pedigree hatching trays, hygrometers, thermometers, acetylene and electric egg testers, and such

chemical and other apparatus as is required for thorough work in the investigation of incubation problems.

The land occupied by the College and its several departments embraces about 116 acres. Of this, thirty-five acres constitute the Campus, laid out with flower-beds, broad stretches of lawn, and wide drives and walks leading to the College buildings. During the summer the conservatory contributes specimen plants for lawn decoration.

Immediately east of the Main Buliding are the parade grounds and athletic field, of about ten acres. The farms comprise 71 acres; the orchards and the small fruit and vegetable gardens, 10 acres. All parts of the College grounds are used by the professors in charge of instruction in agriculture and horticulture and by the Experiment Station staff for the purpose of practical illustration in their respective departments, and for experimentation.

EQUIPMENT.

AGRONOMY. The Department of Agronomy is provided with a large collection of agricultural plants, seeds and soils, representing the main crops and types of soil of the inter-mountain region. The College farms are equipped with the best and latest farming implements and machinery for carrying on work scientifically and successfully. They are divided, for illustrative and experimental purposes, into numerous plats on which many varieties of farm crops are grown and upon which important experiments are carried on.

The Soil Physics Laboratory has a good supply of apparatus for accurate and up-to-date work, including balances, microscopes, drying ovens, hot-water baths, compacting machines, and apparatus for determining the mechanical analysis of soils.

The Farm Crops Laboratory has recently been equipped with gas and has a large supply of farm crops on hand for illustrative

and laboratory work. It is supplied with magnifying glasses, a Grey seed weigher, a vertical air-blast seed separator, a seed germinator and tester, as well as enlarged and dissectible models of various grains, grasses and root crops.

AGRICULTURAL ENGINEERING. The restoration of this branch of study to the Agricultural College has necessitated the equipment of a laboratory specially adapted to this class of work. The equipment consists of several gasoline engines of from two to fifteen horse-power and a horizontal steam engine of six horse-power. The testing laboratory contains a Riehle Bros. hundred thousand pounds testing machine and also a cement testing machine of the same make. The laboratory further contains transits, levels, chains, tapes, leveling rods, range poles, and other apparatus used by students in the work in surveying, irrigation, drainage, and road construction. The drawing rooms and shops of the Mechanic Arts Department with their complete equipment are available for students in Agricultural Engineering.

ANIMAL HUSBANDRY. For this work general use is made of the College barns, live-stock, dairy, etc. During recent years the College has added to the equipment by the purchase, in Europe and in America, of some fine pure-bred horses, cattle and sheep. The large, new, well-lighted live-stock pavilion, one of the finest in the West, has made it possible to do all work indoors under the best conditions.

The model poultry house with its equipment, and the new incubator cellar, afford special facilities for illustrative and practical work with poultry. Several strains of pure-bred chickens, ducks, and geese are kept for experimental purposes.

DAIRYING. The creamery is divided into seven rooms for the various processes of dairy work, and is equipped with all the apparatus necessary for the processes of butter and cheese-making and milk-testing. It is run on a commercial basis, milk being purchased from the farmers living near Logan. Ample facilities are provided for illustrating the handling of milk for the retail trade. The department has an eight-horsepower boiler and a six-horse-

power engine, and model cold storage rooms for butter and cheese.

THE BOTANICAL AND PLANT PATHOLOGICAL LABORATORY is equipped to do work in systematic, histological and physiological botany, as well as in plant diseases. The herbarium consists of 3,000 mounted and named specimens. There are 700 samples of seeds for use in economic botany. A good collection of the plant diseases of the State has been provided for study in plant pathology. Recently new equipment has been provided especially for work in physiological botany and plant diseases. This equipment consists of compound microscopes, dissecting microscope, microtome, autoclav, Arnold sterilizers, and hot-air oven, together with the necessary glassware, stains and reagents to carry on successful botanical work. A culture room has also been provided in which isolations and transfers of organisms can be made under the most ideal conditions. In connection with the laboratory, the department maintains a good working library.

THE DEPARTMENT OF HORTICULTURE makes use of the extensive gardens, green houses, orchards and ornamental grounds of the College and Experiment Station to study the methods of vegetable and fruit growing, and of ornamental horticulture. The proximity of the school to numerous large and small first-class commercial orchards, many of which are visited annually, is a decided advantage to the students in horticulture.

THE VETERINARY LABORATORY is supplied with all the more important surgical instruments, and other material found in a well equipped hospital. A modern operating table, an operating room, box stalls for patients, the necessary medicines, are all at hand. In this laboratory the agricultural students have practice and observation in the treatment of animals.

THE DEPARTMENT OF HOME ECONOMICS occupies an entire building, consisting of a basement and four stories connected by automatic elevator service. In the basement a locker room is provided for wraps. The two kitchen laboratories on the first and second floors have individual work tables equipped with new utensils. One laboratory is provided with individual gas

stoves, the other with individual electric stoves. A small kitchen and dining room are newly and completely equipped with modern furnishings. A chemical laboratory and an experimental laboratory are also found on the second floor. The department has various charts and cabinets of good materials showing composition and process of manufacture. The laundry, which is fitted with stationary tubs, a drier, ironing tables and electric irons, is in the basement. The Department of Domestic Arts occupies the third floor and is completely furnished with the latest improved machines, tables, chairs, tracing boards, electric irons, wardrobes, drawers and cupboards for the finished and unfinished work. The museum material consists of exhibits which show the process of manufacturing wool, silk, cotton, and linen. A large room on the fourth floor is used for a gymnasium in connection with which shower and tub baths are available. A rest room is provided, and the library on the first floor offers opportunity for reading and study.

THE COMMERCIAL DEPARTMENT is equipped for thorough and efficient work in modern business courses. The entire third floor of the front of the Main Building, covering a floor area of 7,225 square feet, is occupied by the department. Each room is specially designed and furnished for the work to be conducted in it. Practice is given in the methods of modern banking, wholesale, retail, and commission trade, and freight, insurance and real estate offices. The room for typewriting contains a full complement of standard machines. The rooms for stenography and penmanship are conveniently furnished for efficient work.

THE MECHANIC ARTS are taught by means of a large and careful selected equipment for practical work in shop and laboratory. The wood shops are supplied with seventy benches with full sets of tools, and with a complete assortment of modern woodworking machinery. For the work in forging there are provided twenty-four single and eight double forges, each with a complete equipment of anvil and tools. In addition there is one furnace, one belted power hammer, drills, swages and leveling table, with a

large assortment of special tools. In the machine shop there are six engine lathes, three universal milling machines, a universal grinder, and various other machines, each with its regular equipment of tools and attachments, many of which have been made by students. All machinery, including blast and exhaust fans for foundry and forge shops, is electrically driven.

THE PHYSIOLOGICAL LABORATORY, located on the first floor, in the south wing of the Main Building, is supplied with skeletons both articulated and disarticulated, many enlarged models of organs, a *papier mache* manikin, and complete slides of all the tissues. Students have access to a set of vertebrate skeletons and to an excellent collection of native animals. The necessary reagents for physiological experimentation are at hand.

THE BACTERIOLOGICAL LABORATORY is well equipped with modern apparatus for the work offered. Each student is provided with a high-power Leitz or Bausch and Lomb microscope. Microscopes with triple nose-piece, fitted with 1-12 and 1-15 oil-immersion objectives, Abbe condenser, and rotary and mechanical stage, are used for identification work. The equipment includes an autoclav, hot-air and steam sterilizers, incubator, refrigerators, ærobic plate apparatus, anærobic tube apparatus, microtome, analytic balance, cages, permanent mounts, precision glassware, chemicals, stains, and culture media. To encourage more careful work, the students are provided with individual lockers.

THE ZOOLOGICAL LABORATORY is equipped with water and gas, and has for use in laboratory work the most improved modern instruments, many embryological models, a *papier mache* manikin, articulated and disarticulated human skeletons, skeletons from each group of vertebrates, collections of mounted birds, mammals, reptiles and fishes, and alcoholic material in many groups. The department has exhibition and systematic collections of insects, and the private collections and libraries of the professors are available to students taking work in the department.

THE CHEMICAL LABORATORIES are well equipped for elementary and advanced work in chemistry. Several valuable col-

lections of gums, oils, coloring matters, foods, etc., are important aids to the students in this department. The laboratories are fitted with water, gas, hoods, and all other conveniences.

THE PHYSICAL LABORATORY occupies a suite of rooms on the second floor. The equipment is very complete, consisting of all the necessary pieces of apparatus for class demonstration; a set of apparatus for elementary laboratory work, sufficient for ten students working on the same experiment; and all pieces required for an experimental course in mechanics, heat, electricity and light .

THE DEPARTMENT OF PHYSICAL EDUCATION has its home in the Thomas Smart Gymnasium, completed at an expense of over $60,000.00, and today the finest and most complete college gymnasium in the Rocky Mountain region. It contains a main exercise hall, 114 by 70 feet, which is well lighted and ventilated. The steel work overhead gives attachment to the hanging apparatus and the equipment is so arranged as to be quickly put in place, or hoisted out of the way, leaving a clear floor space for large classes or games. Ten feet above the main floor is a running track, and on the same level, a model handball court, and a wrestling and boxing room.

The Women's Gymnasium occupies the south end of the building and has a floor space of 70 to 40 feet. On the north end of the building and corresponding to the Women's Gymnasium is a swimming pool, 60 by 24 feet, supplied by a continuous stream of filtered water, and lighted from the bottom, affording superb opportunity for swimming and aquatic sports. In the center of the building are two large dressing rooms equipped with steel lockers, shower and tub baths, a steam room, and all the conveniences found in modern gymnasiums.

The front of the building contains the directors' offices, examining room, reception rooms, and ladies' rest room; the basement is used as an armory for the military department.

The atheletic field and tennis courts are situated close to the gymnasium building and afford opportunities for all forms of athletic games.

THE COLLEGE MUSEUMS contain a large number of specimens illustrative of geology, mineralogy, paleontology, and vertebrate and invertebrate zoology, including a large series of the insects of the intermountain region; also an extensive series of plants of the western highlands. An extensive collection of grains represents the produce of Utah and other states. Contributions of fossils, ores, animals, plants, relics, or other material of value to the museums, will be highly appreciated. All gifts are labeled and preserved, and the name of the donor is kept on record.

THE ART ROOMS are supplied with plain and adjustable tables for the elementary work in drawing and design, also with easels and model stand for the studio. Individual lockers for students and cases for the materials of the department are supplied. Casts from the old masters in sculpture, reproductions of great paintings, examples of Japanese art, still-life models, drawing boards, and draperies are included in the equipment. The department has access to the art library which is well supplied with helpful works on design, home art, sculpture, painting, and architecture.

THE LIBRARY, with the offices and reading room, occupies the entire front of the second floor of the Main Building. The large, well-lighted main room is one of the most cheerful and inspiring reading rooms in the country, with an unsurpassed view over the entire valley. Growing plants, pieces of sculpture, and a number of oil paintings further enhance the attractiveness of the environment. The books are shelved on the Library Bureau standard steel stacks, arranged in alcoves, where tables also are provided for advanced students wishing to do special study. The readers have free access to the shelves.

The library now contains about 21,000 bound volumes and a large number of pamphlets. The books are classified by the Dewey decimal system, and there is a complete dictionary card catalogue of the library. The shelf list is also on cards, and forms a classed catalogue for official use.

The library is a depository for United States public documents, and receives practically all material printed by the gov-

ernment. There are one hundred and twenty-five periodicals on the subscription list, besides about eighty which are received as exchanges for the publications of the College and of the Experiment Station. Thirty-five newspapers of the State are regularly received and placed on file in the reading room.

THE AGRICULTURAL EXPERIMENT STATION.

THE AGRICULTURAL EXPERIMENT STATION is a department of the College, supported by Congressional appropriations, supplemented by the receipts from the sales of farm products, and by such appropriations as the State Legislature makes from time to time to carry out special lines of work, or for the establishment and support of sub-stations. The station was created for the special purpose of discovering new truths that may be applied in agriculture, and of making new applications of well-established laws. It is, therefore, essentially a department devoted to research; and as such, it does the most advanced work of the College.

THE EXPERIMENT STATION is not, in the ordinary sense, an institution where model farming is carried on. It has a much higher purpose. The practices of the farmer are subjected to scientific tests, in order to determine why one is bad and the other good. Acting on the suggestions thus obtained, new lines of investigation are begun, in the hope that truths of great value to the farmer may be discovered.

THE STATION has for its present object the study of the underlying laws of irrigation. On the farm, in the orchards, gardens, and barns, experiments are going on that, in time, will lead to the establishment of an art of irrigation based on laws developed by scientific methods. Experiments for the improvement of alfalfa for hay and seed, of sugar beets in sugar content and seed production, and of potatoes and beans in yield and in quality, are being undertaken. Special investigations for the purpose of encouraging the horticultural, dairy, and poultry industries, and of

reclaiming the alkali and arid lands of the state are also in progress.

By an act of the State Legislature of 1903, six experimental farms have been established in different parts of the state, for the purpose of demonstrating the possibilities of dry or arid farming on the soils of Utah. The work on all these sub-stations, including also the Experimental farm near St. George, in Washington County, is placed under the direction of the Experiment Station. In co-operation with the Department of Agriculture, the Station is carrying on extensive investigations in irrigation, drainage, the breeding of arid farm grains, and the improvement of arid farm methods.

A report and four or five bulletins containing the results of the experiments of the stations are published annually for free distribution among the people of the State.

The Experiment Station has a high educational value. Nearly all the members of the Station Staff are also members of the College Faculty, and the students, therefore, receive at first hand an account of the methods and results of the work of the Station, and training in their application. The opportunities that the Experiment Station offers for advanced work in several branches of science are of great importance. The scientific method and spirit characterize all the operations of the Station, and none can fail to be benefited by a study of the experiments that go on at all times of the year.

The Station Staff are always glad to assist the advanced students of the institution in any investigation they may wish to undertake.

EXTENSION DIVISION.

The Agricultural Extension Division was established for the purpose of disseminating scientific knowledge of Agriculture and Home Economics among the people of the State. The follow-

ing are some of the ways by which the Department is solving the problem of reaching the people:

Farmers' Round-up and Housekeepers' Conference extending over a period of two weeks.

Winter courses held in local communities lasting one week and covering the study of live stock, field crops, soils and domestic science.

Special trains on which are discussed such subjects as dry farming, dairying, hogs, soils, and domestic science.

Farmers' Institutes.

The Agricultural daily and weekly press of the State.

Demonstration and experimental work.

Organizations, such as agricultural clubs, farmers' co-operative organizations, commercial clubs and women's clubs.

Schools, both secondary and common, county superintendents, teachers' institutes and junior work.

Correspondence courses in Agriculture and Home Economics.

Publications, such as bulletins, circulars and leaflets.

Correspondence covering all sorts of questions pertaining to the farm and home: also queries concerning books, free libraries, etc.

It will be seen at once that the Extension Department co-operates with every agency that will help in making better homes, better farms, and better boys and girls.

During the past year farmers' institutes of two or more days have been held in every county in the State. Pruning, Spraying, and Stock Judging demonstrations have been held in connection with each institute. Members of the Extension Staff have been present at various county fairs to act as judges.

The department has also co-operated with the Oregon Short Line, the Salt Lake Route, and the Denver and Rio Grande Railroads in sending out a special Farmers' Institute train. The work on this tour, continuing for three months, consisted of lectures and demonstrations on the Measurement and Distribution of

Irrigation water, Horticulture, Potato Growing and Home Economics. An exhibit prepared by the State Board of Health was included.

This division of the College now receives an annual appropriation of $10,000 and has thus been enabled to do much more efficient work than heretofore. One man was kept in the field in the Uinta Basin during the entire growing season, and this work will be continued during the coming year.

Plans for the coming year contemplate a larger number of Farmers' and Housekeepers' schools. The Extension Division will also conduct the annual Farmers' Round-up and Housekeepers' Conference at Logan, and a similiar convention at Richfield, Sevier County. Wherever the schools are held there must be a guarantee that at least 100 men and 50 women will be in attendanc, who will together pay a fee of $125.00 to assist in defraying expenses.

The subjects discussed at these schools and institutes will meet the needs of the various localities. Separate sessions are held for the men and women in the forenoon and afternoon, these sessions being devoted to lectures and demonstrations on the practical problems of the farm and home. The evening sessions, at which there are lectures on subjects of general interest to the community at large, are held jointly.

The subjects discussed at the men's sessions include soils, field-crops, insect pests, horticulture, diseases of farm animals, farmer's organizations, marketing farm produce, etc.

Improvements in housekeeping have not kept pace with the introduction of improved machinery on the farm, and the farmers' wives and daughters are beginning to see that the time has come when the kitchen, at least, must be remodeled and many appliances and conveniences added. Not only are we offering courses in this line of work at the College, but we are willing to bring these courses to the doors of those who cannot leave their homes.

In connection with the farmers' schools, a week's school in Domestic Science is given for the women. Practical lectures will

be given on such subjects as bread-making, home decoration, house plants, nursing the sick in the home, cheese and butter-making. Demonstrations on meats, soups, sauces, salads, creams, jellies, and cakes form a very important phase of this work. Two women, graduates from schools of domestic science, and with practical experience, devote their entire time to the Extension Division. The beneficial results of these schools are varied, such as exchanging ideas; learning how to do common, every-day duties in a simple manner; enabling us to economize in the most precious commodity we possess, viz: time; in short—learning how to do things from a scientific stand-point.

Arrangements have been made for an elementary course in Agriculture and Domestic Science in the high schools of the State. The Extension Division will give aid to the various high schools whenever practicable. Boys' and Girls' Clubs have been organized in a few counties, and it is planned to extend the scope of this work during the coming season. There is already a large enrollment in our "Boys' Potato Clubs" and in the near future Girls' Clubs for the study of household problems will be organized.

The schedule for the week's schools and agricultural conventions for the coming season is as follows:

Cedar City, General.....Nov. 4th-Nov. 8th, 1912.
Parowan, General.....Nov. 4th-Nov. 8th, 1912.
Beaver City, General.....Nov. 11th-Nov. 15th, 1912.
Hinckley, General .....Nov. 18th-Nov. 22nd, 1912
Richmond, Dairy.....Nov. 25th-Nov. 29th, 1912.
Smithfield, General.....Nov. 25th-Nov. 29th, 1912.
Nephi, Dry Farm.....Dec. 2nd-Dec. 7th, 1912.
Lehi, General.....Dec. 9th-Dec. 13th, 1912.
Spanish Fork, General.....Dec. 9th-Dec. 13th, 1912.
Garland, General.....Dec. 16th-Dec. 20th, 1912.
Brigham City, Fruit.....Dec. 16th-Dec. 20th, 1912.
Huntsville, General.....Dec. 30th-Jan. 3rd, 1913.
Pleasant View, General.....Dec. 30th-Jan. 3rd, 1913.

Grantsville, General.....Jan. 6th-Jan. 10th, 1913.
Sandy, General.....Jan. 13th-Jan. 18th, 1913
Kaysville, General.....Jan. 13th-Jan. 18th, 1913.
Ogden (Farmers' Convention week,
Horticulturists, Dry Farmers,
Dairymen) .....Jan. 20th-Jan. 25th, 1913
Logan, (Farmers' Round-up and
Housekeepers' Conference).....Jan. 27th-Feb. 8th, 1913
Richfield, (Farmers' Round-up and
Housekeepers' Conference).....Feb. 13th-Feb. 22nd, 1913
Provo, General.....Feb. 24th-Mch. 2nd, 1913.
Ephraim, General.....Feb. 24th-Mch. 2nd, 1913.
Kamas, General.....Mch. 4th-Mch. 8th, 1913.
Morgan, General.....Mch. 11th-Mch. 15th, 1913.
Castle Dale, General.....Mch. 18th-Mch. 22nd, 1913.

During the winter and spring, members of the Extension Division visit the larger cities of the State and the majority of Utah farmers. In the summer the territory remote from the railroad is visited, so that in the course of the year practically every farmer in the State is reached.

CORRESPONDENCE DEPARTMENT.

At the commencement of the last College year, the Agricultural College established a Correspondence Department as a branch of the Extension Division. For several years the College has had a few students doing work in agricultural and kindred subjects by correspondence, but now for the first time the institution has regularly recognized this sort of work as one of the functions of the Extension Division and has created a special department to handle it.

The College is no longer regarded as an Institution maintained solely for those who receive instruction in its class-rooms and laboratories. It is for all the people everywhere. Many peo-

ple of all ages are unable to leave their work to receive the advantages of a college education; it is for such that this department has been created.

During its first year the Correspondence Department has had an enrollment of over sixty students from whom more than two hundred reports have been received. Students in this department have taken work in accounting, agricultural engineering, agronomy, English, entomology, history, history of education, mathematics, political science, poultry husbandry, and veterinary science.

The registration in the Correspondence Department includes men and women from all over the State of Utah and the neighboring states, and the old as well as the young. The average age is over thirty years and there have been this past year two students over sixty.

In addition to giving by correspondence the regular courses that are offered in the College, the Correspondence Department further conducts a "Colonists' Course" and a "Housekeepers' Course." The former is a special course for those who have come into Utah recently or those who, having lived here for years, wish to undertake agriculture as a pursuit. This course gives in a brief but practical fashion the fundamental principles of agriculture in the semi-arid West. Such topics as Land Values and Agricultural Production, Homestead Laws and Reclamation Acts, Utah Soils, Principles of Irrigation Farming, Irrigation Law, Farm Crops, Dry Farming, Horticulture, the Extermination of Insect Pests, Plant Diseases, System of Live Stock Farming, Horse Breeding, Poultry Industry, Marketing of Agricultural Products, and Educational Facilities are fully treated. The entire aim of the course is to furnish such information as will meet the individual needs of those enrolled and thereby enable them to become more successful farmers and stock raisers. The Colonists' Course may be completed in from three to five months. The Housekeepers' Course embodies the same general idea, namely, of conveying in a compact fashion and in a brief space of time, the

rudiments of Domestic Arts and Domestic Science in their most practical application to the every day life of the home.

ADMISSION AND GRADUATION.

CONDITIONS FOR ADMISSION. Graduates of the district schools are admitted without examination to the regular three-year High School Course and to the Special High School Courses. Persons of mature years not graduated from the district schools, will also be admitted to the technical work of the latter courses, and to the Short Practical courses in Agriculture, Home Economics, Commerce and Mechanic Arts. Classes in the elementary branches are maintained in order that these students may make up the regular entrance requirements.

Those who have completed the regular High School Course are admitted without examination to the four-year College courses in Agriculture, Home Economics, Agricultural Engineering, Commerce, Mechanic Arts, and General Science. Students may transfer from one regular course to another by making up all the technical work of the course to which they transfer. No one is allowed to substitute technical work of one course for that of another except by permission of the Faculty. Students are admitted to any of the courses leading to degrees upon presenting certificates of accredited high schools, or upon satisfactory examination in the required subjects. Students entering from other schools may be allowed to substitute for some of the required subjects.

Since 1911-12 the College has required three years of high school work for admission to the four-year college courses. Students entetring the college courses from other schools must show credits for three years work in some reputable high school or must present eleven units of high school work in accordance with the new State High School Schedule. Students who began their high school work as first year students at the

U. A. C. in 1909-10, took second-year work in 1910-11, and third-year work in 1911-12, becoming freshmen in 1912-13. Beginning with 1914-1915, students must present 15 units of approved high school subjects for entrance to the college courses.

Candidates for admission to advanced standing may be required to pass satisfactory examination in all the work of the preceding years, or to present satisfactory evidence of having completed an equivalent of such work in some other school or college.

SPECIAL STUDENTS. Persons of mature years, who for satisfactory reasons desire to pursue a special line of study, may be admitted as special students, provided they give evidence of ability to do the work desired. Special students may be allowed to graduate in any of the courses, on condition that they complete the required work and pass the necessary examinations.

REGISTRATION. All students register at the beginning of the collegiate year for the work of the whole year. Changes in registration, and credit for work not registered, will be allowed only by special permission of the Council.

SCHOLARSHIPS. The Federation of Women's Clubs for two years has offered two scholarships to the Department of Home Economics. These scholarships refund to the students the entrance fee. Applications for such scholarships for next year should be made not later than September 1st, 1912.

CLASSIFICATION. All regular students are classified as first, second, third, and fourth year students in the High School, or in Agriculture, Home Economics, Commerce, or Mechanic Arts; or as freshman, sophomore, junior, and senior students in any of the four-year courses leading to a degree.

GRADUATION. Students who complete any of the four-year Special High School courses in Commerce, Mechanic Arts, or Home Economics, receive certificates of graduation. The degree of Bachelor of Science, Bachelor of Science in Agriculture, Bachelor of Science in Home Economics, Bachelor of Science in Agricultural Engineering, Bachelor of Science in Commerce, and

Bachelor of Science in Mechanic Arts, is conferred upon those who complete the regular four-year courses in General Science, Agriulture, Home Economics, Agricultural Engineering, Commerce and Mechanic Arts, respectively.

To obtain a degree the student must have been in attendance at least one school year preceding the conferring of the degree. He must have completed all the prescribed work or its equivalent in one of the four-year college schedules. He must have acquired credits for electives according to the grade and number indicated in his schedule. He must be required to pass a satisfactory oral examination on the technical work of his course before a special committee appointed by the president. He must have no grade lower than D in any subject. Four-fifths of all his term grades must be C or better. He must have discharged all College fees. He must be recommended for graduation by his school faculty and receive the favorable vote of two-thirds of the members of the College Council.

HONORS IN SCHOLARSHIP.

In order to encourage high scholarship the College Council has instituted a College Roll containing the names of all students doing excellent work. This roll is divided into two groups for the High School and two for the College students, the first group containing the names of those who have A or B in all their work, the second composed of students having A or B with one C.

For the year 1911-12 the following students were selected from the College Roll as deserving of some special distinction for high achievements in scholarship. On the last day of school they were, accordingly, publicly honored by receiving either a "College A" or "Honorable Mention" for Scholarship.

The following received "A":

Harry Beagley.
William Baker.

George Stewart.
Heber J. Webb.
Elizabeth Groebli.
Vivian Ericson.

The following received "Honorable Mention":

Ralph O. Porter.
Joseph Hickman.
Theron W. Bennion.
John A. Alder.
Isaac B. Ball.
Orson A. Christensen.

STUDENT ACTIVITIES.

THE STUDENT BODY ORGANIZATION. This society embraces all the students of the institution. Its prime object is to foster a proper spirit of college loyalty. It also secures dispatch and efficiency, as well as uniformity, in the administration of all matters pertaining to the entire student body. Realizing the importance to all students of taking part in the various college activities, the organization further provides each member with the maximum amount of proper athletic, theatrical and social recreation at the minimum expense, viz., $5.00 annually. This society has control of the following student activities:

1. *Athletics,* including all inter-class and inter-collegiate contests in foot ball, base ball, basket ball, and track events.

2. *Musicals,* including all public performances of the Band, the Orchestra, Glee Club, Choir, String Quartette, and Mandolin and Guitar Club. During recent years the following operas have been presented: *Babette, Marriage by Lantern Light, The Geisha, When Johnny Comes Marching Home, The Mikado.*

3. *Theatricals.* Once or twice each season some dramatic performance is given. In the past, two of Shakspere's comedies, *She Stoops to Conquer, Pygmalion and Galatea, The Climbers,*

The College Widow, The Amazons, Sweet Kitty Bellairs, and several minor productions, have been presented.

4. *Debating.* Each year two or more intercollegiate debates occur. In addition there are several debating societies organized by the different classes.

5. *Student Publications.* The students of the College publish a school paper, *Student Life,* which makes its appearance once a week and contains timely editorials, news items, announcements, reports and forecasts of College activities.

6. *Lyceum Course.* Each year the Student Body presents from four to six lecturers or musical organizations, of national or local repute. These entertainments are free to members.

In 1908-9 the juniors inaugurated the publication of a College Year Book, which they christened *The Buzzer.* It was so successful that it has become one of the permanent annual publications of the College. It is now published by the Student Body Association.

CLUBS, FRATERNITIES, AND SORORITIES. Not affiliated with the Student Body Organization, and standing largely for the interests of the various schools, are the following clubs:

The Agricultural Club, which aims to keep its members in touch with current events in scientific agriculture. Special lectures, often illustrated, are given at intervals throughout the season.

Home Economics Club. The Home Economics Club is composed of the students in Domestic Science and Arts. Other students and instructors are eligible to associate membership. The object of the club is to keep students in touch with movements connected with their work and to promote interest in home economics work. Lectures and exhibits are given in connection with the club.

The Commercial Club, working to promote the interests of the Commercial School, to popularize the commercial courses, and to consider matters of interest not encountered in routine work. The club maintains an annual lecture course, given by

prominent men throughout the state on topics of special interest to the business man. All commercial students of college grade are eligible to membership.

The Delta Theta Sigma, a chapter of the recently established national honorary fraternity for students in Agriculture. Members are chosen for scholarships, being selected from among the upper two-fifths of the junior and the senior classes in Agirculture.

The Mechanic Arts Association is designed to promote the social and intellectual interests of the students in that school. All the teachers and all the regularly enrolled students of that school are eligible to membership. Monthly meetings are held throughout the year at some of which lectures are given by specialists.

The Sorosis, open to college women only, and having for its object general literary and social culture, as well as the advancement of college loyalty.

The Sigma Alpha Fraternity, open to college men and having for its object social and intellectual progress.

The Pi Zeta Pi Fraternity, open to college men. Its aims are to promote college loyalty, social and intellectual advancement.

The Phi Kappa Iota, open to college men, having for its purpose intellectual improvement and an increase of fraternal spirit.

The Agora, a fraternal organization open to men who have won places on the intercollegiate debating teams. Its purpose is to foster debating in the College and to keep alive among the old debaters an interest in debating contests.

STUDENT EXPENSES.

Tuition is free. Utah students pay an annual entrance fee of $5. Students registering from other States must pay $25. The privileges of the library and museums are free. In the Chemistry, Physics, Mechanic Arts, and Home Economics laboratories, and in typewriting, students are charged an incidental fee of $1 per credit hour. The total amount varies in each case in accordance with the course taken, ranging from $2.00 to $13.00 a year .

Every regular student must pay a Student Body fee of $5.00 for which a ticket is issued admitting him to all the activities controlled by the Student Body Organization,—athletic events, foot ball, basket ball, base ball, and track, dramatic and musical entertainments, socials, lectures, etc. This system has been found to be a great saving to the students and a most excellent means of fostering proper interest in student activities.

All the boys during three years of their course are required to take Military Drill and must purchase a military uniform. To this rule there is *no exception* unless a very unusual reason exists. This uniform is obtained through the Secretary of the College at actual cost, about $15.00, and has been found more serviceable and far more attractive in appearance than civilian clothes of the same price. With proper care one uniform will last two years.

All students in Domestic Science must provide themselves with two white aprons, two pairs of white half-sleeves, and two holders, six inches square.

All girls taking physical culture must provide themselves with a gymnasium suit and gymnasium shoes. These may be procured at the College. Cost, about $4.00.

The fee charged for a certificate of graduation is $2.50; and for a diploma, $5.00. Students are held responsible for any injury done by them to the College property.

Good board and rooms can be obtained in private houses for $3.50 to $4.50 per week. By renting rooms and boarding themselves, students are able to reduce considerably the cost of room and board. The College maintains a lunch counter where, for a few cents, students may get a hot luncheon daily.

The cost of necessary books and stationery ranges from $10.00 to $15.00 a year.

WINTER COURSE.

In order to be of the greatest service to the greatest number of people the College offers, and has offered annually since its

opening year, a series of winter courses. Hundreds of persons, young and old, men and women, unable to attend school at any other time, have in the past taken advantage of this opportunity, and the number increases each winter. These courses furnish instruction in Agriculture, Home Economics, Mechanic Arts, and Commerce. In addition the student is permitted to take any course or courses in any of the other departments for which he may be prepared. All the work is elective.

SUMMER SCHOOL.

The College maintains, as an integral part of its work, a summer session, beginning early in June, and continuing for six weeks. Every department of the College is represented, the courses of instruction being arranged to meet the peculiar needs of summer students. For the benefit of teachers, special courses are provided in pedagogy, psychology, and nature study, in addition to the regular work of the College. Students desiring to make up conditions or prepare for advanced work are given all assistance possible. The entire equipment of the institution is available for the summer session, and every care is taken to preserve the standard and the spirit of the college. No admission requirements are prescribed, but students in all departments are directed by instructors to those courses in which they may pursue work to the best advantage. Arrangements have been made with county superintendents throughout the State to accept Summer School credits in individual subjects in lieu of examination. An entrance fee of $5.00 is charged for each course for which the student registers. Board and rooms can be secured throughout the city at the usual prices. Special Summer School Circular will be sent on request.

NORMAL TRAINING.

For the purpose of providing specially trained teachers of domestic science and arts, agriculture, and mechanic arts, ar-

rangements have been made whereby the graduates of the State Normal School of the University may enter the degree courses of the Agricultural College and there obtain technical work in Home Economics, Agriculture, and Mechanic Arts. All the work done in the State Normal School will be credited the candidates for the professional degree.

Graduates from the degree courses in Home Economics, Agriculture, and Mechanic Arts of the Agricultural College will be given the normal certificate upon the completion of one year of professional work at the State Normal School.

Graduates from the various Manual Training Courses and other short courses of the Agricultural College will be entered for the professional work of the Normal School, and will be given full credit for the work done at the Agricultural College.

SCHEDULE OF RECITATION HOURS.

The recitation periods, commonly known as hours, are fifty minutes in duration and begin at 8:30 a. m. After the third hour there is a daily intermission of 30 minutes for general devotional exercises. From 11:30 to 1:30 the Cafeteria, or College Restaurant, will be open. The fourth period (from 11:30 to 12:20) is given to Military Drill. The following table shows the entire schedule:

1 hour, 8:30— 9:20.
2 hour, 9:20—10:10.
3 hour, 10:10—11:00.
Chapel, 11:00—11:30.
4 hour, 11:30—12.20.
5 hour, 12:20— 1:10.
6 hour, 1:10— 2:00.
7 hour, 2:00— 2:50.
8 hour, 2:50— 3:40.
9 hour, 3:40— 4:30.

Schools and Courses of Study.

For the purpose of more efficient administration, the College is divided into six schools: (1) The School of Agriculture; (2) The School of Home Economics; (3) The School of Agricultural Engineering; (4) The School of Commerce; (5) The School of General Science; (6) The School of Mechanic Arts. In addition, a High School Department is maintained. These schools are educationally interdependent and together form a unit.

The School of Agriculture offers four-year college courses in Agronomy, Horticulture, Animal Husbandry and Dairying, Agricultural Chemistry, and Economic Entomology; also a short practical course in Agriculture.

The School of Home Economics offers (1) a special four-year High School course in Home Economics; (2) four-year college courses in Domestic Science and Domestic Arts; (3) a short practical course in Home Economics.

The School of Agricultural Engineering offers four-year college courses in Irrigation and Drainage, Farm Mechanics, Agricultural Surveying, Roads, Rural Architecture, Rural Sanitation and Agricultural Technology.

The School of Commerce offers (1) two special four-year High School courses in Commerce; (2) four-year college courses in Finance, Accounting, and Industrial Management; (3) a short practical course in Commerce.

The School of General Science offers a four-year college course in General Science.

The School of Mechanic Arts offers (1) a special four-year High School course which may equip a man for carpentry, forging, machine work, or other trades; (2) a college course in Mechanic Arts; (3) a short practical course in Mechanic Arts.

The High School Department offers besides courses mentioned above a regular High School course which will fit students to enter any of the above schools, or other scientific institutions.

All College courses lead to a degree of Bachelor of Science; all other courses to certificates.

THE SCHOOL OF AGRICULTURE.

Agriculture is one of the most promising of modern professions. It is growing very rapidly, and owing to the scientific foundation that recent years have given it, large numbers of intelligent people are adopting it as their means of livelihood. The new agriculture is not a profession of unceasing toil. On the contrary, the freedom, health, intellectual activity, and profit to be obtained from intelligent farming are attracting the best classes of people. Utah and other western states are offering splendid opportunities to those who prepare themselves for scientific farming. There is a great demand for men who can supervise large farm enterprises; there is a greater demand for men who can act as experts, experimenters or teachers in the schools and other institutions in the State and National Government. The supply of such men does not begin to equal the demand. Many graduates of this School of Agriculture and of other similar institutions have later entered practical work in agriculture.

The instruction in agriculture is provided by the departments of Agronomy, Animal Husbandry, Dairying, Horticulture, Entomology, Chemistry, Poultry Husbandry, and Veterinary Science. The courses of these departments are so arranged as to enable the student to lay a foundation upon which he can build a successful career as a farmer, or develop into a specialist in Agronomy, Animal Husbandry, Dairying, Entomology, Horticulture, or Agricultural Chemistry. The courses leading to a degree are offered for those who desire to secure positions as farm managers, experts in the State or Government employ, or as

members of agricultural faculties and experiment station staffs.

Experience has shown that practically all of the students who take agriculture come from the farms, and it is assumed that they are acquainted with the various manual operations of farm work. The design of the courses, is, therefore, to teach the sciences that underlie practical agriculture, and sufficient supplementary studies to develop the agricultural student to the intellectual level of the educated in the other professions.

The general and departmental libraries enable the student to become acquainted with a wide range of agricultural and related literature: the laboratories of the College, and the Experiment Station afford opportunity for training and experience that it would be impossible to get from books alone.

THE SCHOOL OF HOME ECONOMICS.

The courses in Home Economics aim to train and broaden the minds of women, and to enable them to meet more intelligently the home demands of modern life. When woman has learned to apply the principles of science, economics and art to the problems of daily living she will realize that housekeeping is an occupation worthy of the best thought which results in the betterment of home life and more efficient living. Formerly the higher education of woman led her away from the practical interests of the home. The recent establishment of Domestic Science courses in many leading colleges and universities shows a public demand for education toward home life rather than away from it. The State of Utah wisely established such courses when this College was first organized; and the favor which which the work has been received by the public shows the wisdom of the plans. The Home Economics Courses have been strengthened and improved each year, and better facilities for instruction and study have been provided. The four-year courses give the same training in mathematics, in English, and in science as other baccalaureate courses, together with a broader culture in literature and modern lan-

guages than is offered in any other. Both in the preliminary work and in the advanced years, special studies in the various lines of home science are prescribed in logical order as the distinctive feature of the course. The Manual Training Course in Home Economics is offered for the benefit of young women who do not wish to take the studies of the regular college years, but desire to devote more time to the subjects of special interest to women.

THE SCHOOL OF AGRICULTURAL ENGINEERING.

The rural problem has many phases. An adequate and self perpetuating country life cannot be introduced simply by teaching people how to raise grain and fruit, and how to manage and improve livestock. The country could be filled with farmers well trained in these branches and still there might be a great lack in many of the elements necessary for a well balanced and efficient rural community. There are many problems having to do with the entire community rather than with the individual farmer, and these problems must be solved by men with training for that kind of work rather than by those trained to produce crops and livestock on a single farm. Again, there are questions on the individual farm which have to do with construction rather than with production from the soil. These questions, if they are to be answered properly, must be answered by men with special training.

In the past, agricultural colleges have given their attention to the direct questions of farming, but the time has come when the entire rural problem must be met. The farm, aside from producing good crops, must be a desirable and healthful place to live. The buildings must be so arranged and constructed as to give the maximum of efficiency and comfort and at the same time have proper sanitary provision. The rural roads must be such that the farmer can move his crops with small expense, and can himself go to town with comfort and speed. The machinery of the farm must be so constructed and cared for that it will be re-

liable and do its work economically. The limited supply of irrigation water must be so used that it will produce the maximum returns. There must be manufacturies for working over the raw materials of the farm into high priced finished products. All these necessities demand that there shall be men trained for the work.

These various activities may be classed under the general heading of Agricultural Engineering. To meet the demand for this work, the Utah Agricultural College has organized a School of Agricultural Engineering with seven departments. The work is designed not only to fit men as specialists in any single department, but also to give them such general training in agricultural engineering, that they may be able to solve all but the most technical engineering problems of an entire rural community. The courses will also be very helpful to the man who is going back to the farm, who does not wish to do the work of a trained engineer.

Students may specialize in Irrigation and Drainage, Farm Mechanics, Agricultural Surveying, Farm and Public Roads, Rural Architecture, Rural Sanitation and Public Health, or Agricultural Technology. These courses all lead to the degree of Bachelor of Science.

THE SCHOOL OF COMMERCE.

The purpose of the School of Commerce is to give opportunity for a liberal education with special emphasis upon the commercial and industrial phases of life. Persons who complete the Commercial courses should be better prepared to assume leadership and responsibility in business and in the various industries and professions. In order to meet the growing demands and to keep pace with recent tendencies in business education three courses continuing for four years and leading to the degree of Bachelor of Science in Commerce, are offered. (1) Finance: This course is designed for those who wish to take the greater part of their work in Economics, Law or kindred subjects. (2) Ac-

counting: The work of this course is more highly specialized and is adjusted to the needs of public accountants and those engaged in technical commercial work. (3) Industrial Management: This is an entirely new course. It attempts, first of all, to give the students a firm grasp of the essentials of agriculture, mining, and manufacturing. In the second place, by means of work in economics, law and accounting, it attempts to equip the students so that they may manage these industries successfully.

In addition to these college courses, two high school courses are given: (1) A four years' course designed for those who wish to do secretarial work. Considerable work in stenography and typewriting is required. (2) A four years' course which aims to prepare students to do practical work in bookkeeping as well as to enter some of the college courses. A certificate of graduation is given those who complete the four year courses. A short practical course is also provided for those who wish to take work during the winter months.

For those who wish to enter the professions of law and medicine, the commercial courses afford excellent preparation. Students who complete the courses will be prepared for positions as teachers in commercial schools. The demand for thoroughly qualified teachers is greater than the supply, and many desirable positions as industrial managers are open to those who can do the work.

THE SCHOOL OF GENERAL SCIENCE.

To carry out the work of the several technical schools of the College, an efficient instructing force and a complete modern equipment have been provided in the natural and physical sciences, as well as in mathematics, history, language, etc. This makes it possible to satisfy the growing demand for strong baccalaureate courses affording a broad general education in the earlier years, and admitting of specialization later, when the student has matured his plans. Such courses constitute the work of the School of General Science, and, paralleling the other degree courses of

the College, lead to the degree of Bachelor of Science. The natural introduction to this work is the College Preparatory Course.

Upon completion of four years' work in General Science, students receive the degree of Bachelor of Science in General Science.

THE SCHOOL OF MECHANIC ARTS.

The course in Mechanic Arts is intended to qualify students as artisans, hence the practical work of the shops and drawing room is emphasized. The course admits of specialization in wood work, forging, machine work, foundry, horse-shoeing, carriage building and cabinet making. In this work are developed correct methods of using tools and of doing mechanical work neatly, efficiently and accurately. In all the departments of the school work is done from series of shop drawings, arranged in progressive order, giving both the details of the exercise and a drawing of the finished product. Sufficient work is given in English, mathematics and elementary science to furnish a fair high school education. Students electing any branch of the Mechanic Arts Course are required to do at least one year of work in that branch. No machine work is given until the student has shown a reasonable proficiency with hand tools. All products of the shop are the property of the school, students being allowed to take away specimens of their work only by permission.

The trades have changed greatly in recent years. Science has given them a secure foundation, and the wages of artisans have advanced so rapidly as to make the trades desirable as a means of livelihood. The lack of skilled artisans should encourage many boys to go into this kind of life work. The work offered by this school is a good preparation for engineering courses.

Three courses are offered: a four years' high school course, a short practical course, and a four years' college course leading to the degree of Bachelor of Science. Upon the completion of the four-year Mechanic Arts Course, students receive certificates of graduation.

Schedules of Courses.

COLLEGE COURSES IN AGRICULTURE.

Freshman Year.

This year is the same in all five courses.

	1st Term	2nd Term
English 6 (History of English Literature)	3	3
Chemistry 1 (General Chemistry)	5	5
Mathematics 6 (Trigonometry)	3	0
Agricultural Surveying 1 (Plane Surveying)	0	3
French 2 or German 2	3	3
Farm Mechanics 1 (Farm Machinery)	0	3
Electives	3	0
Military Drill	1	1
	18	18

AGRONOMY.

Sophomore Year.

History 7 (History of Civilization)	2	2
Geology 2 (General Geology)	3	3
Botany 4 (Plant Physiology)	3	3
Bacteriology 1 (General Bacteriology)	3	0
Physiology 2 (Advanced Physiology)	0	3
Library Work	1	1
Agronomy 3 (Cereal Crops)	3	0
Agronomy 4 (Forage and Root Crops)	0	3
Electives	3	3
	18	18

Junior Year.

	1st Term	2nd Term
English 7 (College Rhetoric)	2	2
Economics 2 (General Economics)	3	3
Physics 6 (Agricultural Physics)	3	3
Chemistry 3 (Organic Chemistry)	4	0
Chemistry 5a (Soils)	0	4
Agronomy 14 (Dry Farming)	3	0
Irrigation 2 (Irrigation Practice)	0	3
Agronomy 8 (Soil Management)	2	0
Agronomy 9 (Comparative Soils)	0	2
Electives	1	1
	18	18

Senior Year.

English 15 (General Literature)	2	2
Economics 12 (Agricultural Economics)	3	0
Accounting 8 (Farm Accounts)	0	3
Agronomy 10 (Advanced Soils)	0	2
Zoology 3 (Principles of Breeding)	3	0
Botany 9 (Plant Breeding)	0	3
Meteorology	2	0
Agronomy 19 (Seminar)	1	1
Electives	7	7
	18	18

ANIMAL HUSBANDRY AND DAIRYING.

Sophomore Year.

	1st Term	2nd Term
History 7 (History of Civilization)	2	2
Geology 2 (General Geology)	3	3
Botany 4 (Plant Physiology)	3	3
Bacteriology 1 (General Bacteriology)	3	0
Physiology 2 (Advanced Physiology)	0	3
Library Work	1	1
Animal Husbandry 2 (Breed Types)	3	3
Veterinary Science 2 (Comparative Anatomy)	0	3
Electives	3	0
	18	18

Junior Year.

English 7 (College Rhetoric)	2	2
Economics 2 (General Economics)	3	3
Physics 6 (Agricultural Physics)	3	3
Chemistry 3 (Organic Chemistry)	4	0
Chemistry 5a (Soils)	0	4
Animal Husbandry 3 (Animal Nutrition)	3	3
Animal Husbandry 5 (Live Stock Management)	2	0
Animal Husbandry 6 (Advanced Stock Judging)	0	2
Electives	1	1
	18	18

Senior Year.

English 15 (General Literature)	2	2
Economics 12 (Agricultural Economics)	3	0
Accounting 8 (Farm Accounts)	0	3
Zoology 3 (Principles of Breeding)	3	0
Animal Husbandry 4 (Breeding and Herd Book)	0	3
Poultry Husbandry 1 (General Poultry)	3	0
Dairying 1 (Elements of Dairying)	0	3
Animal Husbandry 9 (Seminar)	1	1
Electives	6	6
	18	18

HORTICULTURE.

Sophomore Year.

	1st Term	2nd Term
History 7 (History of Civilization)	2	2
Geology 2 (General Geology)	3	3
Botany 4 (Plant Physiology)	3	3
Bacteriology 1 (General Bacteriology)	3	0
Physiology 2 (Advanced Physiology)	0	3
Library Works	1	1
Horticulture 2 (General Horticulture)	2	0
Horticulture 3 (Bush Fruits)	0	2
Botany 5 (Plant Pathology)	3	3
Electives	1	1
	18	18

Junior Year.

English 7 (College Rhetoric)	2	2
Economics 2 (General Economics)	3	3
Physics 6 (Agricultural Physics)	3	3
Chemistry 3 (Organic Chemistry)	4	0
Chemistry 5a (Soils)	0	4
Horticulture 7 (Systematic Pomology)	2	0
Horticulture 4 (Vegetable Gardening)	0	3
Entomology 2	3	3
Electives	1	0
	18	18

Senior Year.

English 15 (General Literature)	2	2
Economics 12 (Agricultural Economics)	3	0
Accounting 8 (Farm Accounts)	0	3
Horticulture 9 (Horticultural Literature)	3	0
Horticulture 11 (History of Horticulture)	0	3
Zoology 3 (Principles of Breeding)	3	0
Horticulture 12 (Plant Breeding)	0	3
Physics 8 (Meteorology)	2	0
Electives	5	7
	18	18

ENTOMOLOGY.

Sophomore Year.

	1st Term	2nd Term
History 7 (History of Civilization)	2	2
Geology 2 (General Geology)	3	3
Botany 4 (Plant Physiology)	3	3
Bacteriology 1 (General Bacteriology)	3	0
Physiology 2 (Advanced Physiology)	0	3
Entomology 2	3	3
Library Works	1	1
Electives	3	3
	18	18

Junior Year.

English 7 (College Rhetoric)	2	2
Economics 2 (General Economics)	3	3
Physics 6 (Agricultural Physics)	3	3
Chemistry 3 (Organic Chemistry)	4	0
Chemistry 5a (Soils	0	4
Zoology 3 (Principles of Breeding)	3	0
Zoology 4 (Eugenics)	0	3
Entomology 3	3	0
Zoology 6 (Embryology)	0	3
	18	18

Senior Year.

English 15 (General Literature)	2	2
Economics 12 (Agricultural Economics)	3	0
Accounting 8 (Farm Accounts)	0	3
Physics 8 (Meteorology)	2	0
Entomology 4 (Entomological Literature)	2	2
Entomology 5 (Advanced Entomology)	3	3
Zoology 5 (Histology)	3	3
Electives	3	5
	18	18

AGRICULTURAL CHEMISTRY.

Sophomore Year.

	1st Term	2nd Term
History 7 (History of Civilization)	2	2
Geology 2 (General Geology)	3	3
Botany 4 (Plant Physiology)	3	3
Bacteriology 1 (General Bacteriology)	3	0
Physiology 2 (Advanced Physiology)	0	3
Library Work	1	1
Chemistry 11 (Qualitative Analysis)	3	3
Electives	3	3
	18	18

Junior Year.

English 7 (College Rhetoric)	2	2
Economics 2 (General Economics)	3	3
Physics 6 (Agricultural Physics)	3	3
Chemistry 3 (Organic Chemistry)	4	0
Chemistry 5a (Soils)	0	4
Chemistry 6 (Quantitative Analysis)	3	3
Electives	3	3
	18	18

Senior Year.

English 15 (General Literature)	2	2
Economics 12 (Agricultural Economics)	3	0
Accounting 8 (Farm Accounts)	0	3
Chemistry 10 (Advanced Organic Chemistry)	4	4
Chemistry 14 (Quantitative Analysis)	2	2
Chemistry 15 (Seminar)	1	1
Electives	6	6
	18	18

COLLEGE COURSES IN HOME ECONOMICS.

DOMESTIC SCIENCE.

Freshman Year.

	1st Term	2nd Term
English 6 (History of English Literature)	3	3
Chemistry 1 (General Chemistry)	5	5
French 2 or German 2	3	3
Domestic Science 4 (Preparation of Food)	2	2
Botany 4 (Plant Physiology)	3	3
Physical Education	1	1
Library Work	1	1
	18	18

Sophomore Year.

History 7 (History of Civilization)	2	2
Bacteriology 1 (General Bacteriology)	3	0
Physiology 2 (Advanced Physiology)	0	3
Chemistry 2 (Organic Chemistry)	4	0
Chemistry 4 (Quantitative Analysis)	0	2
Economics 2 (General Economics)	3	3
Domestic Science 7 (House Construction)	3	0
Domestic Science 8 (Household Art)	0	3
Domestic Science 10 (Foods)	0	3
Electives	3	2
	18	18

Junior Year.

English 7 (College Rhetoric)	2	2
Domestic Art 11 (Advanced Dressmaking)	3	3
Physics 7 (Household Physics)	3	0
Chemistry 8 (Household Chemistry)	0	3
Domestic Science 11 (Dietetics and Nutrition)	3	3
Zoology 4 (Eugenics)	3	0
Electives	4	7
	18	18

Senior Year.

	1st Term	2nd Term
English 15 (General Literature)	2	2
Economics 4 (Sociology)	3	3
Domestic Science 9 (Household Administration)	3	0
Accounting 7 (Household Accounts)	0	3
Domestic Art 14 (Textiles)	3	0
Domestic Science 13 (Teachers' Course)	3	3
Electives	4	7
	18	18

DOMESTIC ARTS.

Freshman Year.

English 6 (History of English Literature)	3	3
Chemistry 1 (General Chemistry)	5	5
French 2 or German 2	3	3
Domestic Science 4 (Preparation of Food)	2	2
Botany 4 (Plant Physiology)	3	3
Library Work	1	1
Physical Education	1	1
	18	18

Sophomore Year.

History 7 (History of Civilization)	2	2
Bacteriology 1 (General Bacteriology)	3	0
Physiology 2 (Advanced Physiology)	0	3
Chemistry 2 (Organic Chemistry)	4	0
Chemistry 4 (Quantitative Analysis)	0	2
Domestic Science 7 (House Construction)	3	0
Domestic Science 8 (Household Art)	0	3
Botany 10 (Economic Botany)	0	3
Domestic Art 11 (Advanced Dressmaking)	3	3
Electives	3	2
	18	18

Junior Year.

	1st Term	2nd Term
English 7 (College Rhetoric)	2	2
Economics 2 (General Economics)	3	3
Zoology 4 (Eugenics)	3	0
Art 13 (Costume Design)	3	3
Domestic Art 14, 15 (Textiles)	3	3
Electives	4	7
	18	18

Senior Year.

English 15 (General Literature)	2	2
Economics 4 (Sociology)	3	3
Domestic Science 9 (Household Administration)	0	3
Accounting 7 (Household Accounts)	3	0
Domestic Art 16 (Designing and Modeling)	2	2
Domestic Science 13 (Teachers' Course)	3	3
Electives	5	5
	18	18

COLLEGE COURSES IN AGRICULTURAL ENGINEERING.

IRRIGATION AND DRAINAGE.

Freshman Year.

	1st Term	2nd Term
English 6 (History of English Literature)	3	3
Chemistry 1 (General Chemistry)	5	5
Mathematics 5, 6 (Algebra, Trigonometry)	3	3
German 2 or French 2	3	3
Mechanical Drawing 3	2	2
Shop Work	2	2
Military Drill	1	1
	19	19

Sophomore Year.

English 7 (College Rhetoric)	2	2
History 7 (History of Civilization)	2	2
Mathematics 7 (Analytical Geometry and Calculus)	5	5
Agricultural Surveying 1 (Plane Surveying)	3	0
Farm Mechanics 1 (Farm Machinery)	0	3
Agronomy 3 (Cereals)	3	0
Agronomy 4 (Forage and Root Crops)	0	3
Physics 6 (Agricultural Physics)	3	3
	18	18

Junior Year.

Mathematics 9 (Descriptive Geometry)	3	0
Irrigation and Drainage 7 (Hydraulics)	0	3
Geology 2 (General Geology)	3	3
Agronomy 8 (Soil Management)	3	0
Agricultural Surveying 3 (Canal and Road Surveying)	0	3
Agronomy 14 (Dry-Farming)	3	0
Irrigation and Drainage 2 (Irrigation Practice)	0	3
Rural Architecture 3 (Materials of Construction)	3	0
Rural Architecture 4 (Graphic Analysis)	0	3
Horticulture 2 (General Horticulture)	2	0
Agricultural Surveying 5 (Mapping)	0	2
Electives	1	1
	18	18

Senior Year.

	1st Term.	2nd Term.
Economics 2 (General Economics)	3	3
Political Science 12 (Irrigation Law)	0	3
Botany 4 (Plant Physiology)	3	3
Irrigation and Drainage 3 (Drainage)	3	0
Irrigation and Drainage 4 (Irrigation Systems)	0	3
Irrigation and Drainage 5 (Irrigation Management)	2	0
Irrigation and Drainage 6 (Irrigation Institutions and Economics)	0	2
Rural Sanitation 2 (Water Supplies)	2	0
Library Work	1	0
Electives	4	4
	18	18

ELECTIVE COURSE IN AGRICULTURAL ENGINEERING.

Students of Agricultural Engineering may take either the prescribed four years' course in Irrigation and Drainage or an elective course in which the Freshman and Sophomore years are the same as in the course in Irrigation and Drainage, and the last two years elective. In order to graduate, the student must have passed a total of not less than 18 College credits in Agricultural Engineering subjects, and at least one-third of these credits must be taken in one department.

COLLEGE COURSES IN COMMERCE.

ACCOUNTING.

Freshman Year.

	1st Term	2nd Term
English 6 (History of English Literature)	3	3
Chemistry 1 (General Chemistry)	5	5
French 2 or German 2	3	3
Economics 1 (Elements of Economics)	3	3
Military Drill	1	1
Elective	3	3
	18	18

Sophomore Year.

Accounting 4 (Principles of Accounting)	3	3
History 4 (Modern European History)	3	3
Mathematics, 5, 6 (Algebra, Trigonometry)	3	3
Geology 2 (General Geology)	3	3
Economics 8 (Economic History of the U. S.)	3	3
Electives	3	3
	18	18

Junior Year.

English 7 (College Rhetoric)	2	2
Political Science 4 (Law of Contracts)	3	3
Accounting 5 (Accounting Practice)	4	4
Economics 5a (Money)	3	0
Economics 5b (Banking)	0	3
Electives	6	6
	18	18

Senior Year.

Accounting 6 (Accounting Problems)	3	3
Political Science 5 (Bills and Notes)	3	0
Political Science 6 (Agency)	0	3
Economics 7 (Corporation Finance)	3	0
Economics 10 (Transportation)	0	3
Economics 6a (Public Finance)	3	0
Economics 6b (Taxation)	0	3
Electives	6	6
	18	18

FINANCE.

Freshman Year.

	1st Term	2nd Term
English 6 (History of English Literature)	3	3
French 2 or German 2	3	3
Chemistry 1 (General Chemistry)	5	5
Economics 1 (Elements of Economics)	3	3
Military Drill	1	1
Electives	3	3
	18	18

Sophomore Year.

Accounting 4 (Principles of Accounting)	3	3
Economics 8 (Economic History of the U. S.)	3	3
Geology 2 (General Geology)	3	3
History 4 (Modern European History)	3	3
Botany 4 (Plant Physiology)	3	3
Electives	3	3
	18	18

Junior Year.

English 7 (College Rhetoric)	2	2
Political Science 4 (Law of Contracts)	3	3
Economics 5a (Money)	3	0
Economics 5b (Banking)	0	3
History 3 (English History)	3	3
Electives	7	7
	18	18

Senior Year.

Political Science 5 (Bills and Notes)	0	3
Economics 7 (Corporation Finance)	3	0
Economics 10 (Transportation)	0	3
Economics 6a (Public Finance)	3	0
Economics 6b (Taxation)	0	3
Political Science 7 (Corporations)	3	0
Political Science 8 (Partnerships)	0	3
Political Science 9, 10 (Sales and Mortgages)	3	0
Electives	6	6
	18	18

INDUSTRIAL MANAGEMENT.

Freshman Year.	1st Term	2nd Term
English 6 (History of English Literature)	3	3
French 2 or German 2	3	3
Chemistry 1 (General Chemistry)	5	5
Economics 1 (Elements of Economics)	3	3
Military Drill	1	1
Electives	3	3
	18	18

Sophomore Year.		
Accounting 4 (Principles of Accounting)	3	3
Geology 2 (General Geology)	3	3
Economics 8 (Economic History of the U. S.)	3	3
History 4 (Modern European History)	3	3
Chemistry 2 (Organic Chemistry)	4	0
Chemistry 5a (Soils)	0	4
Electives	2	2
	18	18

Junior Year.		
English 7 (College Rhetoric)	2	2
Political Science 4 (Law of Contracts)	3	3
Chemistry 11 (Qualitative Analysis)	3	3
Economics 5a (Money)	3	0
Economics 5b (Banking)	0	3
Geology 4 (Mineralogy)	3	0
Electives	4	7
	18	18

Senior Year.		
Political Science 5 (Bills and Notes)	3	0
Political Science 7 (Corporation Law)	0	3
Economics 7 (Corporation Finance)	3	0
Economics 10 (Transportation)	0	3
Economics 6a (Public Finance)	3	0
Economics 6b (Taxation)	0	3
Chemistry 9 (Industrial Chemistry)	3	3
Geology 3 (Economic Geology)	3	3
Electives	3	3
	18	18

COLLEGE COURSE IN MECHANIC ARTS.

Freshmen.

	1st Term.	2nd Term.
English 6 (History of English Literature)	3	3
Chemistry 1 (General Chemistry)	5	5
Mathematics 5, 6 (Algebra, Trigonometry)	3	3
French 2 or German 2	3	3
Mechanical Drawing	1	1
Military Drill	1	1
Carpentry	3	3

Sophomore.

History 7 (History of Civilization)	2	2
Mathematics 7 (Analytic Geometry, Calculus)	5	5
Physics 2 (General Physics)	4	4
Mathematics 9 (Descriptive Geometry)	3	0
Architectural or Mechanical Drawing	0	3
Forging	3	3
Sketching and Lettering	2	2

Junior.

English 7 (College Rhetoric)	2	2
Library Work	1	1
Foundry	3	3
Geology 2 (General Geology)	3	3
Economics 2 (General Economics)	3	3
Graphics and Strength of Material or Chemistry 9	3	3
Electives	4	4

Senior.

Machine Work	3	3
Machine Design	2	2
Economics 4 or Agricultural Technology	3	3
Geology 3 (Economic Geology)	3	3
Practice Teaching in Shops	2	2
Electives	9	9

COLLEGE COURSE IN GENERAL SCIENCE.

Freshman Year.

	1st Term	2nd Term
English 6 (History of English Literature)	3	3
Mathematics 5, 6 (Algebra, Trigonometry)	3	3
Chemistry 1 (General Chemistry)	5	5
Library Work	1	1
Military Drill	1	1
Electives	5	5
	18	18

All of the work of the sophomore, junior, and senior years is elective; but students are required to complete two years' work in modern languages, and to take an equivalent of five hours through one year in English, of three hours in economics, and of four and one-half hours in zoology and botany. With these restrictions, the whole field of college work lies open, with the understanding that the student will select some one major subject to which to direct his attention, and will group related courses around this, under the direction of the department in which he specializes. For convenience, the subjects offered have been grouped as below, and the requirement is that above the freshman year the student shall complete ten hours of his work in his major subject, ten hours in subjects found in the same group, and the remainder as he may elect. For graduation, eighteen hours are required in the freshman and sophomore years, and the equivalent of seventeen hours through each of the following years. A subject marked * below cannot become a major in the General Science Course; and as required collateral work, the strictly technical studies are excluded.

Science Group.

Bacteriology	*Geology and Mineralogy.	Chemistry.
Physiology.	*Animal Husbandry	Botany
*Entomology.	*Agronomy.	*Horticulture.
Zoology.	*Home Economics.	

Mathematical Group.

Mathematics.	Physics.	Chemistry.
*Agricultural Engineering.		

Literary Group.

English.	*Economics.	*Political Science.
History.	Languages.	*Art.
		*Accounting.

HIGH SCHOOL COURSE.

First Year*	1st Term	2nd Term
English 3 (Elementary Composition	5	5
Mathematics 2 (Algebra)	5	5
Agronomy 2 and Animal Husbandry 1	4	4
or		
Home Economics (Dom. Science 1 or Dom. Art 1)	5	5
Art 1, 2, or 5	2	2
Physiology 1 (Elementary Physiology)	2.	2
Gymnasium Work	1	1
	19 or 20	19 or 20
Second Year.**		
English 4 (Composition and Classics)	5	5
Mathematics 3 (Algebra and Geometry)	5	5
History 6 (History and Civics)	3	3
Botany 1 (General Botany)	3	3
Military Drill or Physical Education	1	1
Optionals	3	3
	20	20
Third Year.		
English 5 (College Entrance Requirements)	3	3
Physics 1 (Elementary Physics)	4	4
French 1 or German 1	4	4
Zoology 2 (General Zoology)	3	3
Military Drill or Physical Education	1	1
Optionals	3	3
	18	18

OPTIONAL—HIGH SCHOOL COURSE.

Second Year.		
Agriculture	3	3
Horticulture 1	3	0
Irrigation 1	0	3
Home Economics	3	3
Domestics Art 3, 4	3	3

*The first year of all the high school courses will be discontinued after 1912-1913.

**The second year of all the high school courses will be discontinued after 1913-1914.

Third Year.

	1st Term	2nd Term
Agriculture	3	3
Entomology 1	3	3
Physiography	2	2
Veterinary Science 1	3	3
Home Economics	3	3
Domestic Science 2	3	0
Art 4	0	3
Commerce	3	3
History 1	3	3
Economics 11	3	3

MECHANIC ARTS (HIGH SCHOOL).

First Year.*

English 3 (Elementary Composition)	5	5
Mathematics 2 (Algebra)	5	5
Art 3 (Freehand Drawing)	2	2
Shop Work	4	4
Technology 1 (Materials)	2	2
Shop Mathematics 1	2	2
Gymnasium Work	1	1
	19	19

Second Year.**

English 4 (Composition and Classics)	5	5
Mathematics 3 (Algebra, Geometry)	5	5
History 6 (History and Civics)	3	3
Shop Work	4	4
Mechanical Drawing 2	1	1
Military Drill	1	1
	19	19

*Discontinued after 1912-1913.
**Discontinued after 1913-1914.

Third Year.

	1st Term.	2nd Term.
English 5 (College Entrance Requirements)	3	3
Physics 1 (Elementary Physics)	4	4
Mechanical Drawing 3	2	2
Geology 1 or Physiology 1	2	2
Shop Work	5	5
Technology 3	1	1
Military Drill	1	1
	18	18

Fourth Year.

Chemistry 1 (General Chemistry)	5	5
Technology 4	1	1
Mathematics 6 (Trigonometry)	0	3
Mechanical Drawing 4	2	2
Technology 5	2	2
Shop Work	5	5
Mechanical Drawing 5	3	0
Military Drill	1	1
	19	19

HOME ECONOMICS (HIGH SCHOOL).

First Year.*

English 3 (Elementary Composition)	5	5
Mathematics 2 (Algebra)	5	5
Domestic Art 1, 2 (Plain Sewing)	3	3
Domestic Science 1 (Sanitation and Food)	2	2
Physiology 1 (Elementary Physiology)	2	2
Art 2 (Design)	2	2
Gymnasium Work	1	1
	20	20

*Discontinued after 1912-1913 .

Second Year.**

	1st Term.	2nd Term.
English 4 (Composition and Classics)	5	5
Mathematics 3 (Algebra, Geometry)	5	5
Domestic Art 3, 4 (Dressmaking)	3	3
History 6 (History and Civics)	3	3
Physical Education	1	1
Botany 1 (General Botany)	3	3
	20	20

Third Year.

English 5 (College Entrance Requirements)	3	3
French 1 or German 1	4	4
Physics 1 (Elementary Physics)	4	4
Domestic Science 2 (Home Sanitation)	3	0
Zoology 2 (General Zoology)	3	3
Physical Education	1	1
Art 4 (Home Art)	0	3
	18	18

Fourth Year.

English 6 (History of English Literatrue)	3	3
Chemistry 1 (General Chemistry)	5	5
French 2 or German 2	3	3
I. Optionals	4	4
Domestic Science 4.		
Domestic Science, 5, 6.		
Domestic Art 6.		
Domestic Art 13.		
II. Optionals	3	3
Bacteriology 1. Library Work.		
Modern Language. Botany 4.		
Accounting. History.		
Physiography.		
	18	18

**Discontinued after 1913-1914.

ACCOUNTING (HIGH SCHOOL).

First Year.*

	1st Term	2nd Term
English 3 (Elementary Composition)	5	5
Mathematics 2 (Algebra)	5	5
Business Correspondence and Spelling	2	2
Commercial Arithmetic	3	3
Physiology 1 (Elementary Physiology)	2	2
Typewriting 1	1	1
Gymnasium Work	1	1
	19	19

Second Year.**

English 4 (Composition and Classics)	5	5
Mathematics 3 (Algebra and Geometry)	5	5
Accounting 1 (Bookkeeping)	5	5
History 6 (History and Civics)	3	3
Typewriting 2	1	1
Military Drill or Physical Education	1	1
	20	20

Third Year.

English 5 (College Entrance Requirements)	3	3
French 1 or German 1	4	4
Physics 1 (Elementary Physics)	4	4
Accounting 2 (Business Practice)	5	5
Economics 11 (Industrial and Commercial Law)	3	3
Military Drill or Physical Education	1	1
	20	20

Fourth Year.

English 6 (History of English Literature)	3	3
Chemistry 1 (General Chemistry)	5	5
French 2 or German 2	3	3
Economics 1 (Elements of Economics)	3	3
Accounting 3 (Office Practice and Banking)	3	3
Military Drill or Physical Education	1	1
	18	18

*Discontinued after 1912-1913.

**Discontinued after 1913-1914.

STENOGRAPHY AND TYPEWRITING (HIGH SCHOOL).

First Year.*	1st Term	2nd Term
English 3 (Elementary Composition)	5	5
Mathematics 2 (Algebra)	5	5
Business Correspondence and Spelling	2	2
Commercial Arithmetic	3	3
Physiology 1 (Elementary Physiology)	2	2
Typewriting 1	1	1
Gymnasium Work	1	1
	19	19
Second Year.**		
English 4 (Composition and Classics)	5	5
Mathematics 3 (Algebra, Geometry)	5	5
Stenography 1	5	5
History 6 (History and Civics)	3	3
Typewriting 2	1	1
Military Drill or Physical Education	1	1
	20	20
Third Year.		
English 5 (College Entrance Requirements)	3	3
Physics 1 (Elementary Physics)	4	4
Accounting 1 (Bookkeeping)	5	5
Stenography 2	3	3
Economics 11 (Industrial and Commercial Law)	3	3
Military Drill or Physical Education	1	1
	19	19
Fourth Year.		
English 6 (History of English Literature)	3	3
Economics 1 (Elements of Economics)	3	3
Stenography 3	3	3
Accounting 2 (Business Practice)	5	5
Military Drill or Physical Education	1	1
Electives	4	4
	19	19

*Discontinued after 1912-1913.

**Discontinued after 1913-1914.

SHORT PRACTICAL COURSES.

When the Board of Trustees voted to begin the gradual elimination of all the regular high school courses in the fall of 1913, they also voted to establish a series of courses of a purely practical nature. Such courses,—in Agriculture, Home Economics, Mechanic Arts, and Commerce,—will begin this year, and schedules of the first year's work are given below. A second year's work of a more advanced nature in each of the four schools will be offered in 1913-1914. These courses are not intended for young people of the high school age. To enter any of this work, a person must be over eighteen, or must have completed two years high school work. There will be no other entrance requirements, and no entrance examinations.

AGRICUTURE.

First Year.

Not more than four courses can be taken in one year.

	1st Term.	2nd Term.
Crops and Soils	5	5
Fruit Growing	5	5
Poultry Keeping	5	5
Shop Work	5	5
Farm Accounting	5	5

HOME ECONOMICS.

First Year.

Students elect a minimum of eighteen hours from the following subjects, or from these and any others which they are qualified to pursue.

Domestic Art 1, 2	3	3
Domestic Science	5	5
Physiology 1	2	2
English 3	5	5
Art	3	3
Gymnasium Work	1	1
Accounting 1	5	5
Mathematics 2	5	5

MECHANIC ARTS.

First Year.

Students elect a minimum of eighteen hours of work from the following subjects or from these and any others which they are fitted to pursue, e. g., Agriculture, English, Accounting, Mathematics.

	1st Term.	2nd Term.
Carpentry	5	5
Blacksmithing	5	5
Horse Shoeing	5	5
Machine Work	5	5
Mechanical Drawing	5	5
Foundry Work	5	5

COMMERCE.

First Year.

Students elect at least 18 hours. English required.

English	5	5
Bookkeeping	5	5
Stenography	5	5
Commercial Arithmetic	3	3
Business Correspondence and Spelling	2	2
Business Law	3	3
Physical Education	1	1

WINTER COURSES.

(Tuesday, November 5th, 1912, to Saturday, March 15, 1913.)

These courses will be discontinued after 1912-1913, their places being taken by the Practical Courses, pages 78, 79.

AGRICULTURE.

Second Year.

English 3b	5
Mathematics 2b	5
Shop Work	2
Animal Husbandry 1	4
Entomology 1 or Veterinary Science 1	3
	19

MECHANIC ARTS.

Second Year.

English 3b	5
Mathematics 2b	5
Art 3b	2
Shop Work	4
Technology 1b	1
Shop Mathematics 1b	1
	18

COMMERCE.

The following subjects will be offered from which winter students may elect from 18 *to* 20 *hours.*

English 3a	5
Business Correspondence and Spelling	5
Commercial Arithmetic	5
Political Science, 1a	3
Penmanship	1
Accounting 1	1
Economics 11	3

Departments of Instruction.

ACCOUNTING.

ASSISTANT PROFESSOR P. E. PETERSON.

1. BOOKKEEPING AND ACCOUNTING. This course is intended to impart a training in the art of bookkeeping based upon the fundamental principles of Accountancy. It follows strictly the lines of the best modern practice. The old-style merchandise account is eliminated, and the entries are made to purchases, sales and inventory accounts. Subsidiary Trading and Profit and Loss accounts are thoroughly explained. Contrary to the usual custom, students are taught the use of the special books—purchases, sales and cash book, from the start; also the journal entry method of closing the Trading and Profit and Loss accounts. Thorough drill in the preparation of Trading and Profit and Loss statements and statements of Resources, and Liabilities is given. Two hours daily throughout the year. Ten credits.

2. BUSINESS PRACTICE. The student employs the principles learned in course one in a manner approaching as nearly as possible to actual business. He performs complete transactions with the firms represented in the office practice department. As much of the work is done by correspondence, special emphasis is given to letter writing. A daily rapid calculation drill is given. Two hours daily throughout the year. Ten credits.

3. OFFICE PRACTICE AND BANKING. In this course the student is employed successively in offices representing various

lines of business, as wholesale and retail merchandising, real estate and insurance, commission, railway station work, and banking. Corporation organization and accounting are emphasized. The student is thoroughly drilled in adapting his theoretical principles to varied conditions and methods. Six credits.

4. PRINCIPLES OF ACCOUNTING. This is a first course in the study of the "Construction and Interpretation of Accounts." It is designed to meet the needs of College Students who may not have had previous bookkeeping training by devoting a few weeks to the study of bookkeeping. After this preliminary work the students begin a study of the more advanced principles, such as the significance of the balance sheet, depreciation, the distinction between charging to capital and charging to revenue, the distinction between capital and income in bond investments and the various problems involved in cost, bank, manufacturing, railway, trust, and municipal accounting. Two lectures and one three-hour-laboratory period throughout the year. Six credits.

5. ACCOUNTING PRACTICE. This course follows in a concrete and practical way the principles studied in Accounting 4. It is intended to diminish the inevitable term of apprenticeship by furnishing the student a variety of actual business experience. The student will be placed in charge of an office or department and, under the direction of the instructors, required to put into practice the more advanced business and accounting principles. This course will be of special value to students intending to teach commerce as well as to those preparing for business. Two lecture and four two-hour laboratory periods throughout the year. Eight credits.

6. ACCOUNTING PROBLEMS. This course is specifically intended to prepare men for work as public accountants. It gives careful attention to the working out of various published reports and balance sheets, and the solution of such accounting problems

as are likely to come up in actual practice. Three hours throughout the year. Six credits.

7. HOUSEHOLD ACCOUNTS. This course is intended to meet the needs of the students in the School of Home Economics. Laboratory work, one term. Three credits.

8. FARM ACCOUNTS. This course is designed to meet the needs of the students in the School of Agriculture. Laboratory work, one term. Three credits.

COMMERCIAL ARITHMETIC.

This is a complete course in commercial mathematics. Particular attention is given to business measurements, and to percentage and interest as applied to profit and loss, commission, stocks and bonds, insurance, bank discount, averaging accounts, and partnership adjustments. Short methods are emphasized. Three hours throughout the year. Six credits.

BUSINESS CORRESPONDENCE AND SPELLING.

This course is designed for first year students. Practice in the writing of all kinds of business letters is given and the correct use of all business blanks and forms is emphasized. The latter part of the course is devoted to the acquiring of a business vocabulary. Two hours throughout the year. Four credits.

AGRICULTURAL ENGINEERING.

IRRIGATION AND DRAINAGE.

PROFESSOR HARRIS.
PROFESSOR J. W. JENSEN.

1. ELEMENTARY IRRIGATION AND DRAINAGE. An elementary course designed especially to meet the requirements of the student who can give but a limited time to the subject. Lectures on field irrigation and methods of farm drainage. Field excursions to irrigation systems and practical drainage operations. Three hours, one term. Three credits.

2. IRRIGATION PRACTICE. This course deals with the agricultural rather than with the engineering side of irrigation. It treats of methods of handling the water after it has reached the land, and of the relations between moisture and crops. Those periods in the growth of plants especially influenced by moisture-environment, and the effect of this environment on the yield and composition of crops will be given special attention. Prerequisites, Botany 1 and Agronomy 14. Two lectures and one laboratory period, second term. Three credits.

3. FARM DRAINAGE. This is a technical course, dealing with the laying out and constructing of drainage systems in arid regions. Special attention will be given to the drainage of alkali lands. Three hours, first term. Three credits.

4. IRRIGATION SYSTEMS. In this course irrigation systems are studied as units. Such problems as the planning and conducting of irrigation projects, forming companies, getting rights, laying out and constructing canal systems, will be discussed. Trips will be made to inspect some of the important irrigation projects of the state. Three hours, second term. Three credits.

5. IRRIGATION MANAGEMENT. This course deals with methods of managing irrigation canals after they have once been put into operation. It discusses methods of keeping the canal in repair, and properly distributing the water to users. It will be especially valuable to water masters. Two hours, first term. Two credits.

6. IRRIGATION INSTITUTIONS AND ECONOMICS. This course treats of the relation of irrigation to various industries and to the country in general. It also discusses the law regulating the use of water. Two hours, second term. Two credits.

7. HYDRAULICS. This is a technical course dealing with the flow of water in natural and artificial open channels,

in pipes, and flumes; the elementary laws of liquids in motion and at rest; and the elementary principles of water power development. Three hours, second term. Three credits.

8. RAINFALL AND RIVER FLOW OF THE WORLD. A general survey of the regions of the world where the rainfall is so light as to require irrigation; the available supply of irrigation water in streams, and the possible methods of increasing that supply by reservoirs, etc. Two hours, one term. Two credits.

9. RESEARCH. Seniors in Irrigation and Drainage who have the proper training may spend part of their time investigating some problems of the subject. Credit according to work done.

FARM MECHANICS.

PROFESSOR R. B. WEST.
MR. HUMPHERYS.

1. FARM MACHINERY. A general course dealing with the machines used on the farm, their development, design, construction, operation, draft, durability, and care. The student will be made familiar with mechanical principles and will have practice in handling common farm machinery. Two lectures and one laboratory period, second term. Three credits.

2. MOTORS AND ENGINES. A detailed study of gasoline and steam engines and practice in handling them. Two lectures and one laboratory period, first term. Three credits.

3. TILLAGE AND HARVESTING MACHINERY. A detailed study of the various implements used in preparing the land for seed and in cultivating the crop. The complicated parts of harvesting machinery will be examined, and students will have practice in adjusting and operating these machines. Lectures and laboratory work. Two hours, second term. Two credits.

4. MACHINERY OF FARM MANUFACTURING. This is a brief course dealing with the installing and operating of machinery for

special purposes, such as dairying, canning, etc. One lecture and one laboratory period, second term. Two credits.

AGRICULTURAL SURVEYING.

PROFESSOR R. B. WEST.

1. PLANE SURVEYING. This course deals with the general methods of plane and topographic surveying, and the use, care, and adjustment of instruments. Three hours, first term. Three credits.

2. FARM SURVEYING. This course is designed primarily for students in agriculture. Practice will be given in the handling of surveying instruments. The field work will be that connected with the layout and leveling of land, running lines for ditches, etc. Prerequisite, agricultural surveying. Three hours, one term. Three credits.

3. CANAL AND ROAD SURVEYING. In this course instruction and practice will be given in surveying proposed canals and roads. Two hours, one term. Two credits.

4. SOIL AND OTHER AGRICULTURAL SURVEYS. Instruction in the methods of preparing maps of a given agricultural area, and surveys of the various agricultural interests within the area under the direction of a specialist in the particular line. Three hours, one term. Three credits.

5. MAPPING. A course in the principles and practices of mapping various engineering projects. Two hours, one term. Two credits.

ROADS.

PROFESSOR WILLIAM PETERSON.

1. ROAD CONSTRUCTION. A study of such questions as the establishment of grade, drainage, and road bed; road materials, including different kinds of earth, gravel, and stone; the slope

of the road surface; rock crushing, rolling, etc. The cost of building different kinds of roads and the proper manner of performing the various operations economically will be fully discussed. Prerequisite, Surveying. Three hours, first term. Three credits.

2. ROAD MAINTENANCE. The effect of the widths of tires on the road, keeping the road in proper form, adding materials to worn surfaces, keeping the drainage channels clean, employment of labor on the roads, cost of maintenance, etc. Prerequisite, Road Construction. Three hours, second term. Three credits.

3. BRIDGE BUILDING. A course dealing with methods of bridge construction, a study of materials used, and the amount of stress on arches of various kinds. The relative cost, strength and durability of different bridges will be discussed. Special attention will be given to small bridges on the farm. Three hours, one term. Three credits.

4. ROAD MATERIALS. In this course a detailed study will be made of the various materials used in the construction and maintenance of roads. Special attention will be given to the materials which are available to Utah farmers. Prerequisite, Geology 2 and 4. Three hours, one term. Three credits.

RURAL ARCHITECTURE.

1. FARM STRUCTURES. This is a course dealing with the arrangement, design and construction of barns, stables, poultry houses, silos, fences, gates, and other farm outbuildings. Three hours, first term. Three credits.

2. FARM HOMES. This course deals with methods of arranging and planning houses suited to the conditions of the farm. Special attention will be given to houses within the reach of the average farmer. Three hours, second term. Three credits.

3. MATERIALS OF CONSRTUCTION. A study of the materials used in construction; their strength and resistance, action

under various methods of loading, the stress set up in beams, columns and girders; and problems in the design of structural parts. Special attention will be given to building materials which are available to Utah farmers. Three hours, one term. Three credits.

4. GRAPHIC ANALYSIS OF FRAME STRUCTURES. Diagrams for steady load, snow, and wind, the stress on arches with steady and shifting load, the kind of trusses in common use, and the solution of various problems that arise in the design of such trusses. Three hours, one term. Three credits.

5. CONCRETE CONSTRUCTION FOR AGRICULTURAL PURPOSES. A study will be made of various mixtures of cement and the uses that can be made of them. The use of concrete in the making of barns, watering troughs, posts, etc., will be discussed. Two hours, one term. Two credits.

6. DRAFTING. A course in drawing plans for buildings, including detailed drawings of parts, cross sections, etc. This course deals with the technique of drafting rather than with creating plans. Three hours, one term. Three credits.

7. PLANNING OF FARM STRUCTURES AND HOMES. This course treats of the making of plans for farm buildings, including complete specifications, cost of materials, and erection. Time and credit to be arranged with the instructor.

RURAL SANITATION.

PROFESSOR E. G. PETERSON.

1. SANITATION. A general course in the principles of sanitation in relation to rural homes and communities. The nature of disease; methods of its spread and means of prevention; the most sanitary methods of arranging and constructing farm buildings; methods of disinfecting. Prerequisite, Bacteriology 1. Three hours, one term. Three credits.

2. Rural Water Supplies. Methods of supplying farm homes and rural communities with sanitary water. Special attention will be given to Utah conditions. Three hours, one term. Three credits.

3. Rural Waste Disposal. This course will discuss the methods of handling the wastes of the farm and small town in a manner that will be both convenient and sanitary. Three hours, one term. Three credits.

4. Sanitary Analysis. This course will deal with methods of making chemical and bacterial analysis of water, milk, etc., for sanitary purposes. It is intended primarily as a training for inspection work. Prerequisite, work in chemistry and bacteriology. One lecture and two laboratory periods, one term. Three credits.

5. Disease Prevention. Arrangements will be made to have lectures on this subject by competent physicians and others. Special attention will be given to rural conditions. The course will be of a popular nature and will be open to all students of the College. Two hours, one term. Two credits.

6. Sanitary Statistics. This will be a course in vital statistics, showing the effects of sanitary precautions on the death rate. Comparisons will be made of the death rate of cities and of country communities. Methods of getting statistics and determining death rate will also be discussed. Two hours, one term. Two credits.

AGRICULTURAL TECHNOLOGY.

Professor Porter.

1. Manufacture of Agricultural Products. This is a general course dealing with the conversion of the raw materials of the farm into finished products. The course will cover in a general way the processes of manufacturing beet sugar, starch, soap, vinegar, pickles, alcohol, molasses commercial fertilizers, paper,

turpentine, lime, cement, and glass. Special attention will be given to the factories in operation in Utah and to industries that could profitably be developed in this State. Visits to several factories operating in the State will be required. Prerequisite, Chemistry 1. Three hours throughout the year. Six credits.

2. MANUFACTURE OF BEET SUGAR. This course will deal with the practical methods of obtaining sugar from the beets. Factory methods will be studied in detail from the standpoint of the student who intends to go into sugar factory work, either as foreman, chemist, or manager. Laboratory work will be required in this course and all factory processes from the cutting of cossettes to the crystallization of the sugar will be carried out. The chemical work of determining the acidity, alkalinity and purity of the juice in various stages, and the estimates of sugar by the polariscope, will be given careful attention. Prerequisites, Agricultural Technology 1 and Chemistry 2. Two lectures and one laboratory period, first term. Three credits.

3. MILLING AND CANNING INDUSTRIES. The first part of this course will deal with the milling of grain, the various types of wheat and the milling qualities of each. It will include experimental work on scouring, tempering, grinding, separating, mixing, and bleaching. Various milled products of wheat, such as rolled wheat, germade, graham, and macaroni, will be prepared.

The second part of the course will be devoted to canning processes, including the preparation of canned fruits and vegetables, meats, and condensed milk. Two lectures and one laboratory period, second term. Prerequisites, Agricultural Technology 1 and Bacteriology 1. Three credits.

4. RESEARCH. Students properly qualified may do research work in any of the lines of manufacturing. Time and credit to be arranged with the instructor.

AGRONOMY.

PROFESSOR HARRIS.
MR. BOWMAN.
MR. MERRILL.

2. ELEMENTARY AGRICULTURE. This course is designed especially to meet the needs of three classes of students: 1. Those students not registered for agriculture who desire, while in the college, to get a brief insight into the subject; 2. Beginning students in agriculture who wish a general view of the subject in its related form before specializing in any of its branches; 3. Prospective teachers in elementary or secondary schools who may need to give instruction in agriculture or nature study. The various subjects pertaining to agricultural science will be treated in a non-technical manner. Lectures, demonstrations, and written reports. Four hours, one term. Four credits.

3. CEREAL CROPS. Lectures, recitations and laboratory practice on the history, cultivation, production, and marketing of cereal crops. The peculiarities, special cultural needs, and comparative values of each, will be discussed. The laboratory practice is designed to give an intimate knowledge of the plants and a basis for judging their products. Two lectures and one laboratory period, one term. Three credits.

4. FORAGE, ROOT AND MISCELLANEOUS CROPS. Lectures, recitations, and laboratory practice on alfalfa, clovers, grasses, sugar beets, potatoes, and other crops. Their history, methods of cultivation, harvesting, marketing, and value, will be discussed. In the laboratory the plants and their products will be studied in detail. Field trips will also be taken. Two lectures and one laboratory period, one term. Three credits.

5. SEEDS. Judging of wheat, oats, barley, corn, potatoes, etc., and a study of market grades and adulterations. The quality and preservation of seeds; their storage, shrinkage, vitality, ger-

mination, methods and depth of planting, and methods of treatment to prevent diseases. Class room, laboratory, and field work. Two hours, first term. Two credits.

Alternates with Agronomy 6.

6. WEEDS. This course includes lectures and class and laboratory exercises on the occurrence, identification, and best methods of eradication of the principal noxious weeds of the State. Each student will be required to classify and mount a number of specimens for the department herbarium. Prerequisite, Botany 1. One recitation and one laboratory period, first term. Two credits.

Alternates with Agronomy 5.

7. INVESTIGATION AND EXPERIMENTATION. A study of the organization and work of various experiment stations and other agencies of agricultural research in this and other countries. The work done by the different stations, as well as the problems at present under investigation will be reviewed. Experiments will be planned; common weaknesses in manipulation will be considered; and practice will be given in drawing conclusions from submitted data. Not open to students below the junior year. Two hours, throughout the year. Four credits.

8. SOIL MANAGEMENT. A practical course, dealing with the application to actual farming operations of the principles studied in Chemistry 5a. It is designed to meet the needs of farm managers, giving them a knowledge of the most approved methods of handling western soils. It treats such subjects as time and method of plowing and the other tillage operations; the rotation of crops; the methods of conserving soil moisture; methods of manuring; the improvement of alkali soils; and such other practical operations and problems as are encountered in the management of soils. Lectures and demonstrations. Three hours, first term. Three credits.

9. COMPARATIVE SOILS. A study of the soils of the world, compared as to their origin, composition, and agricultural value. The various soil provinces and types of the United States and especially those of the arid regions will be investigated and the methods of their classification disscussed. The soils of Utah will be taken up in detail; the crops adapted to them, and the treatment they should receive will be given special attention. Two hours, one term. Two credits.

Alternates with Agronomy 10.

10. ADVANCED SOILS. A discussion of the chemical, physical, and biological properties of soils. The course will treat of the methods of soil investigation and theories of fertility; the relation between soils and crops; and the ultimate effect of certain soil treatments. Special study will be made of the soil solution and of the movements of moisture in the soil. Lecture and laboratory, second term. Four credits.

Alternates with Agronomy 9. Not given during 1912-1913

11. ADVANCED LABORATORY IN SOILS. Experiments covering somewhat the same field as covered by the lectures in Agronomy 3. Exercises will be given dealing with the soil solutions, the fixation of substances added to the soil, soil moisture relations, alkali, and similar subjects. Agronomy 10 must precede or accompany this course. Two hours or more, second term. Credits to be arranged.

12. MANURES. This course deals with the sources, uses, and effects of artificial fertilizers and amendments; the kinds, compositions, functions, and deterioration of farm manures and the economical methods of their use. Experiments with manures conducted at different stations will be discussed in detail. One hour, first term. One credit.

14. DRY-FARMING. Instruction is given in the methods best adapted to the growing of profitable crops on arid lands; the treatment of the soil, including the conservation of soil moisture

by deep and fall plowing, mulching, etc.; the soils and crops best adapted to arid farming; and the regions offering favorable conditions for its successful practice. The experiments being carried out at the different arid experimental farms of the state are discussed. Three hours, one term. Three credits.

15. IRRIGATION PRACTICE. For a description of this course see Irrigation 2. Prerequisite Botany 1 and Agronomy 14. Three hours, second term. One and one-half credits.

16. FARM MANAGEMENT. This course meets the needs of those who expect to conduct practical farming operations. It treats of the selection and laying out of a farm, the kind of farming which should be carried on in a given locality, the proper balance between the various activities of the farm, the rotation of crops, raising and marketing different kinds of crops and animals, keeping farm records, the profitable employment of labor, and similar questions of profitable farming. Its purpose is to bring together the facts learned in the various technical courses and apply them to a rational system of farming. Prerequisites, Economics and as many courses as possible in Agronomy, Animal Husbandry, and Horticulture. Three hours, one term. Three credits.

17. CROP ECOLOGY AND AGRICULTURAL GEOGRAPHY. The first part of the course will comprise lectures and demonstrations on the relation of plants to their climatic environment. The second part will discuss the types of agriculture in vogue in various parts of the world, and the reasons for these particular types. Prerequisite, Botany 1. Two hours, first term. Two credits.

Alternates with Agronomy 18. Not given during 1912-1913.

18. HISTORY OF AGRICULTURE AND RURAL SOCIAL CONDITIONS. The first part of the course will deal with the various practices employed in agriculture by different peoples during the history of the world from the time of the earliest records to the

present; also of the introduction of science into agriculture and the resulting improvement in methods. The second part will deal with social conditions as they exist among rural communities, the changes they have undergone with the improvements in agriculture, and the problems that need solution at the present time. Not open to students below the junior year. Two hours, first term. Two credits.

Alternates with Agronomy 17.

19. SEMINAR. Each week the advanced students of Agronomy will meet for one hour to review current agronomic literature, discuss agricultural problems, and report on assigned topics. Required of seniors specializing in Agronomy; open also to juniors. One hour throughout the year. Two credits.

20. RESEARCH. Seniors specializing in Agronomy may elect research work in any branch of the subject. Time and credit to be arranged with instructor.

ANIMAL HUSBANDRY.

PROFESSOR CAINE III.
ASSISTANT PROFESSOR TURPIN.
ASSISTANT PROFESSOR CARROLL.

1. MARKET TYPES. The judging of market types of horses, cattle, sheep, and swine. Some score card practice will be given, but most of the work will be comparative judging of groups of animals. Five hours, one term. Four credits.

Prerequisite for all other courses in Animal Husbandry.

2. BREED TYPES. The work covers the origin, history and characteristics of the different breeds of horses, cattle, sheep and swine, especial stress being laid upon their adaptability to Western conditions. In addition instruction is given in the judging of

representatives of different breeds according to their official standard. Three hours throughout the year. Six credits.

3. ANIMAL NUTRITION. A brief study of the anatomy and physiology of the digestive system, and the purposes of nutrition; the theory and practice of feeding, with especial reference to Utah conditions. Three hours throughout the year. Six credits.

4. PRINCIPLES OF BREEDING AND HERD BOOK STUDY. The laws of heredity, correlation, revision, variation, fecundity; the methods of breeding, cross-breeding, in-and-in breeding, and selection. Special attention will be given to the methods of celebrated breeders. This work will be followed by a study of the various herd books and of the pedigrees of noted individuals of the important breeds. Prerequisite, first term of Zoology 4. Three hours, one term. Three credits.

5. LIVE STOCK MANAGEMENT. The housing, care and management of different classes of live stock, with especial attention to Western conditions. One lecture and two laboratory periods, one term. Two credits.

6. ADVANCED STOCK JUDGING. A course in the judging of groups of animals of all classes. It takes up the work done at fairs, and prepares the student for real judging in the ring. Attendance at the State Fair and at all accessible county fairs is required as part of this course. Prerequisites, Animal Husbandry 1 and 2. Two hours, first term. Two credits.

7. PRACTICAL FEEDING. This course is a combination of many of the principles of courses in feeding and management, and will be wholly practical. Some time will be given to the laws of nutrition, the balancing of rations, and the care and management of all classes of live stock. Three hours, first term. Three credits.

8. ADVANCED NUTRITION. A study of the methods of ex-

perimentation, as recorded in bulletins, scientific findings, etc., in greater detail than in Animal Husbandry 3. Three Hours, second term. Three credits.

9. SEMINAR. The advanced students of Animal Husbandry and Dairying meet once a week with instructors of the department to review the current literature and special phases of these subjects. Two long reports on assigned subjects will be required. One hour throughout the year. Two credits.

POULTRY HUSBANDRY.

ASSISTANT PROFESSOR TURPIN.

1. GENERAL POULTRY. This course includes practical laboratory work besides assigned reading, lectures and recitations on the more important phases of poultry management. The question of breeds, judging and breeding, incubation, brooding, housing, feeding and marketing are taken up in as much detail as time will permit. Two recitations and one laboratory period, one term. Three credits.

2. INCUBATION. Besides considerable practical and experimental work in incubation, this course includes a series of lectures and assigned readings on the important factors which influence the hatching quality of eggs, both before and during the incubation period. Prerequisites, Poultry 1, Chemistry 1, Physics 1, and Physiology 1. One recitation and two laboratory periods, one term. Four credits.

3. FEEDING AND BROODING. This course includes much experimental and practical work in feeding for growth, egg production, and market qualities. Prerequisites, Poultry 1 and Chemistry 1. One recitation and laboratory work according to special appointment. Credit according to the amount of work done.

4. BREEDS AND BREEDING. A study of the origin and de-

velopment of the more important breeds and varieties of poultry. Practice in judging according to the standard of perfection and for special market types. A review of the literature on breeding for utility and exhibition purposes. Prerequisites, Poultry 1, Zoology 2, 3. Credit according to the amount of work done.

5. ANATOMY, PHYSIOLOGY AND DISEASES OF POULTRY. The work on diseases will consist principally of the causes and methods of identification and prevention. Prerequisite, Poultry 1. Two recitations and one laboratory period throughout the year. Six credits.

ART.

ASSOCIATE PROFESSOR FLETCHER.
ASSISTANT PROFESSOR POWELL.

1. NATURE DRAWING AND DESIGN. Drawing from plant, animal, and insect forms with a view to preparing students for their scientific work as well as developing their artistic sense; the study of the principles of design and their application. Five hours throughout the year. Four credits.

2. DESIGN. The work in this course aims to acquaint the student with the principles that underlie all art. The fundamental principles of order, as expressed by balance, rhythm, and harmony, are considered, and problems of home life embodying these principles are worked out. Five hours throughout the year. Four credits.

3. FREEHAND DRAWING AND DESIGN. Perspective and sketching from objects with careful attention to pencil rendering; ornamental drawing from casts and decorative details; constructive design of furniture and architecture. Five hours throughout the years. Four credits.

4. HOME ART. A continuation of Art 2 with greater em-

phasis on applied design in stenciling, block-printing, etc. Designing for art needle work, costume design and decoration, and other problems of home life compose part of the work. Seven hours, one term. Three credits.

5. GENERAL ART STUDY. This course is designed to acquaint the student with general art study. Object drawing, sketching, elementary design, and lettering with talks on the history of art, will compose the course. Five hours throughout the year. Four credits.

7, 8, 9. SCIENTIFIC DRAWING. These courses are designed for those wishing practice in microscopic drawing. Five hours a week for each course throughout the year. Four credits.

10. HISTORY OF ART. A general course in the history of painting, sculpture, and decoration. Two hours throughout the year. Four credits.

11. AESTHETICS. A general course in the fundamentals of beauty as applied to the arts. Two hours throughout the year. Four credits.

12. ADVANCED ART NEEDLEWORK.

13. PROFESSIONAL COSTUME DESIGN.

14. HOME CRAFTS.

15. POTTERY AND CHINA DECORATION.

16. LETTERING.

17, 18, 19. FURNITURE, METAL, AND INTERIOR DESIGN.

20. STUDIO WORK. Advanced sculpture and painting.

Hours and credits for electives, if not stated above, to be arranged with the instructor.

BACTERIOLOGY.

PROFESSOR E. G. PETERSON.

1. GENERAL BACTERIOLOGY. The preparation of media, sterilization, different staining methods, classification, general biology, cultural characters of typical forms, quantitative and qualitative methods of examination; function, distribution cultivation, isolation, and identification of important forms. One term of laboratory work and lectures. Three credits.

2. PATHOGENIC BACTERIOLOGY. A course covering the fundamentals of the subject: morphology, classification, biology, distribution, function, cultural and staining characters, methods of cultivation, theories of immunity, the principles of of applied bacteriology. A discussion of disease-producing organisms. Three lectures, one term. Three credits.

3. SOIL BACTERIOLOGY. A course covering the principles of soil bacteriology and fitting the student for original investigation. Exercises involving questions of relation of depth, moisture, character of soil temperature, chemical reaction, and æration, to bacterial life; ammonification, nitrification, denitrification, nitrogen fixation, cellulose fermentation, soil inoculation, including the isolation, cultivation and detailed examination of the organisms causing the changes. Chemical methods of interpreting bacterial fermentations are studied in considerable detail. Laboratory work, lectures and reports. Prerequisite, Bacteriology 1. Six hours, one term. Three credits.

4. DAIRY BACTERIOLOGY. A course covering the principles of dairy bacteriology. A consideration of the bacteria of milk, butter, and cheese; infectious diseases in their relation to the dairy; contamination by air, water, and utensils; desirable and undesirable fermentations. Laboratory work, lectures, and re-

ports. Prerequisite, Bacteriology 1. Six hours, one term. Three credits.

5. HOUSEHOLD BACTERIOLOGY. A study of bacteria in their relation to household economy; bacteria in milk, water and other foods; milk and water contamination; effects of cooling and pasteurization upon milk; yeasts, molds and fermentation; bacteriology in relation to canning and preservation; minimum, optimum and maximum temperatures, and thermal death point of important household species; action of disinfectants. Laboratory work, reports and discussion. Prerequisite, Bacteriology 1. Six hours, one term. Three credits.

6. RESEARCH WORK. The laboratory and library facilities are especially arranged to meet the needs of advanced students desiring to undertake bacteriological investigation with reference to agriculture, household science, the industries, sanitary science, and veterinary science. Time and credit to be arranged.

7. SEMINAR. The advanced students and others interested will meet to discuss current literature and to hear the results of original investigation. Credit may be received for attendance at these meetings.

BOTANY.

PROFESSOR C. N. JENSEN.
MR. G. L. ZUNDEL.

1. GENERAL BOTANY. This course aims to give a general insight into the physiology, morphology and life history of representative plants, physiological ecology, plant geography, and representative families of the flowering plants. The work in physiology will deal with such subjects as protoplasm; how plants obtain water; starch and sugar formation; transpiration; respiration; growth, and death. Under morphology and life history of

representative plants, types from algae to flowering plants will be considered. In physiological ecology the various members of plants are studied in relation to environment, while in plant geography, societies of plants are considered in relation to their surroundings. An herbarium of fifty flowering plants will be required. One recitation and five hours of laboratory work throughout the year. Six credits.

Botany 1 is prerequisite for all other courses in Botany.

2. FLOWERING PLANTS. Principles of classification of angiosperms and gymnosperms with special reference to grasses, composites, poisonous plants, weeds, and timber trees. This course is designed to meet the needs of students interested in forestry and those desiring more taxonomic work than can be obtained in Botany 1. One lecture and five hours of laboratory, twenty weeks in the fall and spring. Three credits.

3. HISTOLOGY. This course includes a study of the cell and its contents, minute anatomy of plants, and histological technique. Special emphasis is placed on cell functions, development of tissue into structures and organs, and preparation of material for microscopic study. One lecture and five hours laboratory work, one term. Three credits.

4. PLANT PHYSIOLOGY. A study of the processes and functions of plants, including osmosis and absorption, transpiration, translocation, photosynthesis, respiration, and fermentation, nitrogen fixation, growth, correlations, periodicity in development, heredity and variation, stimulus and response, reproduction and death. One lecture, one recitation, and five hours laboratory, throughout the year. Six credits.

6. ETIOLOGY OF PLANT DISEASES. This is a study of the taxonomy and phyllogeny of plant disease-producing organisms. One lecture and two laboratory periods throughout the year. Six credits.

Omitted in 1912-1913.

7. SEMINAR. For advanced students in botany and plant pathology. A discussion of recent literature of botanical and plant pathological interest. Reports on special topics are required of each member of the course. One hour throughout the year.

8. RESEARCH COURSE. Students specializing in Botany or Plant Pathology will be given opportunity in their Senior year to do original investigation on assigned topics.

10. ECONOMIC BOTANY. A study of useful plants and plant products. This course is presented by lectures, assigned readings, and reports. Three hours, second term. Three credits.

CHEMISTRY.

PROFESSOR STEWART.
ASSOCIATE PROFESSOR GREAVES.
ASSISTANT PROFESSOR PORTER.
MR. HIRST.

1. GENERAL CHEMISTRY. This course deals with the important facts and fundamental theories of chemistry, and with the applications to the arts and manufactures. The laws of chemical combination, the writing of reactions, and the solving of chemical problems are given careful consideration. Three recitations and two laboratory periods throughout the year. Ten credits.

2. ORGANIC CHEMISTRY. A brief survey of the more important reactions and compounds of the fatty and aromatic series of hydrocarbons and their derivatives. Special attention is paid to the chemistry of the fats, the carbohydrates, the proteins, the amino acids, and the dyes. Three recitations and one laboratory period, first term. Four credits.

3. ORGANIC CHEMISTRY. Lectures and assigned readings on the organic chemical problems of agriculture. After a study

of the fundamental principles of organic chemistry, a systematic study is made of carbohydrates, fats, and proteins. This course is designed to furnish the agricultural students with the necessary groundwork for future work in physiological botany and physiology. Three recitations and one laboratory period, first term. Four credits.

5a. SOILS. A study of the methods of the analysis of soils in their relation to crop production; soils of the arid and humid regions; alkali soils, their nature and composition, utilization and reclamation; soil fertility and methods of maintenance; the value, composition and preservation of barn-yard manure. Prerequisite, Chemistry 1. Four hours, second term. Two credits.

5b. SOILS. A laboratory course in the study of the soil. Soils, crops, and fertilizers are analyzed for phosphorus in the soil, and the influence of the different plant foods on the growth of the plant, are studied in the laboratory. Prerequisites, Chemistry 1, 5a. Two laboratory periods. Two credits.

6. QUANTITATIVE ANALYSIS. After becoming somewhat familiar with the common methods of quantitative analysis the student analyzes various products, such as milk, butter, etc. Three laboratory periods throughout the year. Six credits.

7. PHYSIOLOGICAL CHEMISTRY. In this course the student considers the chemical changes going on in the living animal body; the essential composition of foods and the changes through which they pass in the animal economy; the chemistry of secretions and excretions, and of the blood and tissues. Prerequisites, Chemistry 1 and 2. Three recitations, second term. Three credits.

8. HOUSEHOLD CHEMISTRY. A quantitative chemical study of the composition of the air of the household; a study of the composition of water and its contamination, and of the composition of foods and their adulterations. One recitation and three laboratory periods, second term. Four credits.

9. INDUSTRIAL CHEMISTRY. Lectures and assigned reading on special chemical industries, e. g. the manufacture of sulphuric acid, soda, commercial fertilizers, lime and cement, glass and porcelain, pigments, sugar, starch, alcohol, soap, and explosives. Prerequisite Chemistry 1. Three hours throughout the year. Six credits.

10. ADVANCED ORGANIC CHEMISTRY. In this course a systematic study is made of the compounds of carbon from the point of view of systematic organic chemistry. This course is designed for students who intend to make chemistry a profession. Two recitations and two laboratory periods throughout the year. Eight credits.

11. ADVANCED QUALITATIVE ANALYSIS. This is mainly a laboratory course in qualitative analysis. Three laboratory periods throughout the year. Six credits.

12. RESEARCH WORK. The laboratories of the College and Experiment Station are open to students with the necessary preparation who desire to pursue independent studies in chemistry. The researches carried on by the chemistry department of the Experiment Station are of great aid to the students who are engaged in the solution of scientific problems. Time and credit to be arranged with the instructor.

13. PHYSIOLOGICAL CHEMISTRY. Given for students who are specializing in Agricultural Chemistry. Some of the subjects treated are: the carbohydrates, their metabolism in plant and animal organisms; the proteins, their value in the plant and animal economy; the relationship between the fats, carbohydrates and proteins; the importance of inorganic substances in the building of cells and tissues; the chemistry of the blood and tissues. Prerequisites, Chemistry 1, 3 and 6. Three recitations and two laboratory periods, second term. Five credits.

14. SPECIAL COURSES IN QUANTITATIVE ANALYSIS. Courses

are offered in special phases of quantitative analysis to students who are qualified.

a—Water analysis.

b—Food analysis.

c—Soil Analysis.

d—Urine analysis.

e—Gas analysis.

Time and credit to be arranged with the instructor.

15. SEMINAR. Members of the chemical faculty and senior students meet once a week for a discussion of assigned problems in chemistry.

DAIRYING.

PROFESSOR CAINE III.
ASSISTANT PROFESSOR CARROLL.
MR. S. L. BINGHAM.

1. ELEMENTS OF DAIRYING. The secretion and composition of milk; testing for fat, acid and adulterants; dairy sanitation; pasteurization; separation; manufacture of butter and cheese on the farm. Two lectures and one laboratory period, second term. Three credits.

2. INSPECTING AND TESTING DAIRY PRODUCTS. A study of the Babcock test; acid tests; methods of detecting preservatives and adulterations in milk and its products. Prerequisites, Dairying 1 and one term's work in Chemistry. Two laboratory periods throughout the year. Four credits.

3. DAIRY FARM MANAGEMENT. This course will consist of a brief review of the various breeds of dairy cattle and methods of selecting the same; starting a dairy herd; individual and herd selection; selecting a herd bull; calf raising; development of the dairy heifer; care and management of the dairy cow; feeding for milk production; stables for cows; and various minor considera-

tions connected with these main headings. Each student will be required to submit an original plan of a dairy farm, showing the values of the different sections of property, estimated expense of operation, and profits to be derived from the business. Prerequisite, Animal Husbandry 2. Two hours, second term. Two credits.

4. BUTTERMAKING. A course designed to meet the needs of creamery men. Receiving, sampling, and separation of milk; pasteurization; preparation and use of starters; ripening of cream; principles of churning; salting, working and packing butter; creamery accounting, construction of creameries. Prerequisite, Dairying 1. One lecture and two laboratory periods throughout the year. Six credits.

5. CHEESEMAKING. A course for cheese factory operators, A study of the manufacture of the different kinds of cheese; the principles involved in the setting, cutting, heating, milling, salting, pressing, and curing of cheese; cheese factory construction. Prerequisite, Dairying 1. One lecture, and one laboratory period of six hours throughout the year. Six credits.

7. RESEARCH WORK. A study of various important dairy subjects; a digest of recent dairy work of the experiment stations. Only advanced students are allowed to take this course. Two credits.

ECONOMICS.

PROFESSOR THOMAS.
ASSISTANT PROFESSOR HENDRICKS.

1. ELEMENTS OF ECONOMICS. This course endeavors to explain the laws of man's economic activity. It is, therefore, the basis of a scientific understanding of industrial conditions. Some of the topics studied are: economic wants, value, rent, wages, profits, interest. Three hours throughout the year. Six credits.

2. GENERAL ECONOMICS. This course treats practically the same subjects as Economics 1, but in a more thorough manner Three hours throughout the year. Six credits.

3. HISTORY OF COMMERCE. Its development in Egypt, Greece, Rome, Florence, Medieval Europe; the commercial nations of modern times. Three hours throughout the year. Six credits.

4. ELEMENTS OF SOCIOLOGY. A general course in the foundations and principles of sociology, including a careful study of the social organs, social structure, and social activities. Three hours throughout the year. Six credits.

5a. MONEY. A general survey of the laws and forms of money and credit; the money question; the money market; experience and legislation of recent times. Three hours, first term. Three credits.

5b. BANKING. History and theory of banking in the United States and foreign countries; foreign exchanges. Three hours, second term. Three credits.

6a. PUBLIC FINANCE. A course dealing chiefly with the principles underlying public expenditures, revenues, and administration. Three hours, first term. Three credits.

6b. TAXATION. A study of the methods of federal and state taxation, including the customs and internal revenue duties; income, business, inheritance, general property and corporation taxes. Three hours, second term. Three credits.

7. CORPORATION FINANCE. A study of corporate incomes, expenditures, debts and administration. A survey of the laws governing the growth of corporations, and the relationship to the State. Three hours, first term. Three credits.

8. ECONOMIC HISTORY OF THE UNITED STATES. The principal events of our political life are treated from the standpoint of their economic causation. The history of the tariff, money and

banking, agriculture, manufacturing, etc., will be taken up. Three hours throughout the year. Six credits.

9. MARKETING OF PRODUCTS. The methods now practiced in the organization of the selling branch of industrial and merchandising business. The principal subjects in this field are: publicity agency, advertising, forms and correspondence, credits and discounts. Two hours, throughout the year. Four credits.

10. RAILWAY TRANSPORTATION AND PRACTICE. The development of the railway system, railway finance, railway statistics; the theory of rates, methods of public control in Europe, Australia, and America. Three hours, second term. Three credits.

11. INDUSTRIAL AND COMMERCIAL LAW. A study of the elementary principles of law relating to common business transactions, including contracts, sales, promissory notes and bills of exchange, contracts of common carriers, agency, partnership and corporations. Three hours throughout the year. Six credits.

12. AGRICULTURAL ECONOMICS. This course deals with the economic principles which underlie farm management, estate management, and agrarian legislation. Especially adapted to Western conditions. Three hours, first term. Three credits.

15. A RESEARCH COURSE IN ECONOMICS. Time and credit to be arranged with the instructor.

ENGLISH.

PROFESSOR LARSEN.
ASSISTANT PROFESSOR PEDERSEN
MISS HUNTSMAN.
MISS KYLE.
MRS. CLARK.
MISS MANNING.
MISS JOHNSON.

3. ELEMENTARY COMPOSITION. First year high school Eng-

lish. Drill in reading simple classics, in grammar, spelling, punctuation, and in the use of the dictionary; written and oral composition, with special emphasis on the latter. The aim of all branches of the work is simply elementary correctness. Five hours throughout the year. Ten credits.

4. COMPOSITION AND CLASSICS. Second year high school English. Reading and careful study of classics; oral and written composition, in particular drill in paragraph writing; study of classic myths. An outline course in American Literature will furnish material for practice in note-taking. Five hours throughout the year. Ten credits.

5. COLLEGE ENTRANCE REQUIREMENTS AND COMPOSITION. Third year high school English. A course in advanced high school composition, devoted to the different kinds of writing, with much drill in oral composition and debating. Further drill in note-taking is provided throughout the course. Three hours throughout the year. Six credits.

6. ENGLISH LITERATURE. History and development of English literature from the Anglo-Saxon period to the present day. The important authors are studied and a great deal of prescribed reading furnishes material for class-room discussions and written reports. The student is required to commit a number of poems or parts of poems to memory. Three hours throughout the year. Six credits.

7. COLLEGE RHETORIC. A comprehensive course in College Rhetoric, with special attention to the forms of prose discourse. The practical work consists of themes, oral discussions, and debates. A certain amount of outside reading is prescribed. Two hours throughout the year. Four credits.

ELECTIVES.

Only seven, or at the most eight, elective courses will be given in any one year; hence, before registering, students will

consult the head of the department. Prerequisites for all, except courses in elocution and public speaking, English 6 and 7.

8. THE ELIZABETHAN DRAMA. The origin and development of the drama in England: its history to the closing of the theatres in 1642. Three hours throughout the year. Six credits

Omitted in 1912-1913.

9. THE ROMANTIC MOVEMENT. The origin and growth of romanticism in English prose and poetry of the eighteenth and nineteenth centuries. Three hours throughout the year. Six credits.

Omitted in 1912-1913.

10. SHAKSPERE. A course in Elizabethan English based on the careful, detailed study of six of Shakspere's plays. Textual interpretation; some outside reading. Three hours throughout the year. Six credits.

Alternates with English 10a. Omitted in 1912-1913.

10a. SHAKSPERE. A comprehensive study of his development as a dramatist, including the reading of all his plays and sonnets. Lectures and reports; supplementary reading. Three hours throughout the year. Six credits.

11a. THE SHORT-STORY. A study of this special type of fiction, consisting of lectures and recitations, much outside reading, and the composition of stories. Two hours throughout the year. Four credits.

11b. THE MODERN DRAMA. A study of the stage of to-day and of recent and living dramatists. Lectures, readings and reports. Three hours, second term. Three credits.

12. AMERICAN LITERATURE from the Colonial times to the present, keeping in view contemporary development in England. Three hours throughout the year. Six credits.

Omitted in 1912-1913.

13a. THE ENGLISH NOVEL. Its origin, development and most important types. The short-story receives some attention. Lectures, class-room discussions, readings and reports. Three hour, first term. Three credits.

13b. TYPES OF FICTION in the eighteenth and nineteenth centuries. Lectures, assigned readings and reports. Three hours, second term. Three credits.

14a. MILTON. A careful study of the times, life and works of Milton, together with a survey of contemporary literature in England. Three hours, first term. Three credits.

14b. THE ENGLISH ESSAYISTS. Lectures and reports, oral and written, on the esayists from Bacon to Stevenson. Assigned readings and seminars. Three hours, second term. Three credits.

The half-courses 13a, 13b, 14a, and 14b will be given every third year. Omitted in 1912-1913. Given in 1913-1914.

15. GENERAL LITERATURE. A study of world classics exclusive of those taken up in English Literature. The aim of this course will be to increase not merely the general information of the student, but also, and in particular, his general culture, by bringing him, at a mature stage of his development, in contact with the works of Homer, Virgil, Dante, the Greek dramatists, Hebrew literature, Cervantes, Goethe, and other men and works of universal appeal. Two or three hours throughout the year. Four or Six credits.

16a. ROMANTIC POETS OF THE EARLY NINETEENTH CENTURY. A study of the poetry of Wordsworth, Coleridge, Scott, Byron, Shelley, and minor poets. Lectures, readings and reports. Three hours, first term. Three credits.

16b. STUDIES IN THE VICTORIAN POETS: Tennyson, the Brownings, Matthew Arnold, the Pre-Raphaelites, minor poets. Lectures, readings and reports. A continuation of English 16a. Three hours, second term. Three credits.

17. THE SEVENTEENTH CENTURY. A study of the most important works produced in England between 1600 and 1700, due emphasis being placed on the periods following the Elizabethan. Three hours throughout the year. Six credits.

18. THE EIGHTEENTH CENTURY. A study of the main currents of English literature between 1700 and 1800, prefaced by a historical survey of the century. Chiefly a reading course, with due emphasis on the lives of the great writers. Lectures and reports. Three hours throughout the year. Six credits.

19. THE NINETEENTH CENTURY. The culmination of romanticism, the rise of the novel, the Victorian era. Lectures, readings and reports. Three hours throughout the year. Six credits.

Given in 1912-1913.

English 17, 18 and 19 will be given successively every three years.

20. ARGUMENTATION AND DEBATING. A course for college students offering a maximum of practice in debating, and argumentative writing and speaking. Three hours throughout the year. Six credits.

Omitted in 1912-1913.

21. THE BIBLE AS ENGLISH LITERATURE. Lectures, assigned readings, and reports. Attention is given to the historical setting of the various books. Three hours, one term. Three credits.

22. ELOCUTION. This course is designed for the development of the power of vocal expression and also as a general interpretative course in literature. A variety of the best literary selections are studied from the oral standpoint with the view of making them more intelligible to the reader and listener in their content and purpose. Prerequisite, English 4. Three hours throughout the year. Six credits.

23. ADVANCED ELOCUTION. In this course the principles of literary expression are applied, in the main, to the interpretative study of dramatic literature. Shakspere and some of the modern dramatists are carefully studied interpretatively. Prerequisites, English 5 and 22. Two hours throughout the year. Four credits.

24. PUBLIC SPEAKING. Practical training in the various forms of public speaking: the formal address, the debate, the eulogy, the oration, the short, impromptu speech, the toast. The aim of this course is to train the pupil to think on his feet, and to deliver himself intelligently, logically, effectively, and with ease. Prerequisite, English 5. Three hours throughout the year. Three credits.

25. JOURNALISM. A study of magazine and newspaper writing with special attention to college journalism. Three hours, first term. Three credits.

ENTOMOLOGY.

PROFESSOR TITUS.
MR. NELSON.

1. ENTOMOLOGY. This is an elementary course intended to give students a general knowledge of insects and their relation to man and his products, and to furnish simpler means of control. The life histories of those species most commonly affecting our crops, orchards and animals, and the common household pests, are studied. The students become familiar from actual specimens with the appearance of the more common forms. The relation of insects to diseases is briefly considered. Spraying apparatus, grasshopper machines and various other devices used in practical entomology are exhibited and the student learns their use. The common insecticides are prepared in the laboratory or orchard. Three lectures a week, one term. Three credits.

2. ENTOMOLOGY. The structure and classification of insects is taken up in detail. Students are required to collect, mount, and identify a collection of the local insects. The laboratory work consists of examinations of the anatomy of various insects, and the classification of collected specimens. Two lectures a week and one laboratory period throughout the year. Six credits.

3. ENTOMOLOGY. The subjects briefly considered in Entomology 1 are here given full treatment and especial attention is given to insects of the intermountain region. Students are required to do considerable reading in the literature of economic entomology and to become familiar with the methods used in other regions and their results. In the laboratory especial attention is given to the different stages of the principal economic insects in the local fauna, and to those insects likely to be introduced. Prerequisite, Entomology 1 or 2. Two lectures and one laboratory period, first term. Three credits.

4. ENTOMOLOGICAL LITERATURE. This course is designed for students intending to specialize in Entomology. Certain insects and the literature relating to them are carefully studied. Each student is expected to make an exhaustive investigation of some particular insect. Conferences are held and the general history of entomology is covered in a series of lectures. Prerequisite, Entomology 1 or 2. This course may be taken for one term or throughout the year. Three or six credits.

Alternates with Entomology 5. Omitted in 1912-1913.

5. ADVANCED ENTOMOLOGY. A course in advanced entomology for those students intending to teach or to go into government or experiment station work. A special group will be assigned each student and he is expected to submit a thesis on the classification and general economic consideration of the group. Time and credit to be arranged with the instructor.

Alternates with Entomology 4.

GEOLOGY AND MINERALOGY.

PROFESSOR WILLIAM PETERSON.

1. PHYSIOGRAPHY. A course to develop observation of natural phenomena and give an appreciative knowledge of the work of nature as it concerns the changes of the earth's surfaces. Topics to be studied will include: the Earth as a body in space; surface structure; erosion, aggradation. The atmosphere and the influences of physiographic conditions on the development of an agricultural region. A brief study will be made of the common rocks of Cache Valley. Two hours, throughout the year. Four credits.

2. GENERAL GEOLOGY. A course outlined to give students a comprehensive survey of the field covered by geological science; a general discussion of dynamic, structional, and historical geology. Particular attention is paid to the changes the earth's surface is now undergoing and the forces which produce them, as a means of interpreting the past. The course will include laboratory study of the common rock and rock-forming minerals, with special stress on the soil product resulting from rock disintegration. A part of the second term's work is given to a careful study of the geological development of the North American continent. Field trips to points of geological interest are required. The formations are studied and written reports made on the same. Three hours throughout the year. Six credits.

3. ECONOMIC GEOLOGY. The object is to give the student some idea of the mineral resources of the United States. The work will include a careful study of the processes of preparation, and the economic value of coal, petroleum, natural gas, asphaltum, building stones, cements, clays, mineral fertilizers, mineral water, fuller's earth, lithographic stone, precious stones, etc. Frequent reference will be made to the Reports of the United States Geolog-

ical Survey. Prerequisites, Geology 2 and Chemistry 1. Three hours throughout the year. Six credits.

4. MINERALOGY. A descriptive and determinative study of the more important minerals. The student is furnished with excellent specimens of all minerals studied for both tests and comparisons. The first half-year is given to a discussion of crystallography and the physical properties of minerals. During the second half-year the work of the course is largely individual laboratory work in blow pipe analysis and determinative mineralogy. Prerequisites, Geology 2 and Chemistry 1. Two recitations and four hours laboratory, one term. Three credits.

6. ADVANCED PHYSIOGRAPHY. This course is intended for students of college grade who wish to obtain a more complete knowledge of physiographic features and processes than can be given in Geology 1. A careful study of the physiographic development of the United States is taken up. Lectures will be supplemented by field work and laboratory work, and by considerable outside reading. Prerequisites, Geology 1 and 2, and Chemistry 1. Two hours, second term. Two credits.

7. PETROLOGY. A systematic study of rocks and the rock-forming minerals. Particular attention is given to the origin and formation of the different kinds of igneous rocks and methods for the determination of the minerals which compose them. Prerequisites, Geology 2, 4, and Chemistry 1. Lectures, reading and laboratory work. Two hours throughout the year. Four credits.

8. FIELD GEOLOGY. Includes a complete study of the structural and areal geology of Utah and the Intermountain region. Methods employed in field work and the mapping of a region from geological field notes are carefully studied. During the year the students will work out the geology of an assigned area. Lectures, supplemented by reading. Prerequisites, Geology 2, 3, 4, and Chemistry 1. Two recitations, one afternoon field work or laboratory period throughout the year.

HISTORY.

ASSISTANT PROFESSOR DAINES.
MR. ROBINSON.

1. ANCIENT HISTORY. An elementary course intended to give the student a broad view of Ancient Civilization and its relation to the modern world. Greek history occupies the first term; Roman history, the second. Three hours throughout the year. Six credits.

2. UNITED STATES HISTORY. A High School course intended for students who have had insufficient training in American history. The course is a study of social life, economic conditions, political development, and historical literature. Three hours throughout the year. Six credits.

3. ENGLISH HISTORY. A college course covering the history of England to the present time. Attention is paid to the history of English dependencies and the growth of the British Empire. No text-book is prescribed but students are required to supplement the lectures by readings from the standard English histories. Three hours throughout the year. Six credits.

4. MODERN EUROPEAN HISTORY. A College course covering the history of Continental Europe from the fifteenth century to the present day. The first four weeks are devoted to a summary of the period 800 A.D. to about 1450 A.D. This course is conducted by lectures, supplemented by readings from standard authorities. Attention is paid to historical geography. Open to students who have had History 1 or who can otherwise satisfy the instructor of their fitness. Three hours throughout the year. Six credits.

5a. HISTORY OF THE AMERICAN WEST. A College course dealing with the expansion of the American people westward. Special stress is laid on the ecomonic factors at the bottom of this westward movement. Such topics as the Land Policy of the Federal Government, the Indian question, Immigration, Conservation,

and the like, are discussed. The course is conducted by lectures which students are required to supplement by selected readings. A thesis on some special topic is required of each member of the course. Three hours, first term. Three credits.

5b. SELECTED TOPICS IN THE GROWTH OF THE AMERICAN WEST. An advanced college course open only to students who have attained grade A or B in History 5a or can otherwise satisfy the instructor of their fitness. This course is conducted by lectures and discussions in which the students are expected to take part. Three hours, second term . Three credits.

6. ENGLISH HISTORY AND AMERICAN CIVICS. A High School course. This course takes up English history and, unlike History 2, deals with American civics rather than with American history. Three hours throughout the year. Six credits.

7. HISTORY OF CIVILIZATION. This course does not aim to cover in any detail the political history of the world; its purpose is rather to give a broad view of those factors in ancient, medieval and modern civilization that have been of greatest permanent value in our own day. Attention is given to the history of education, the fine arts, philosophy, the art of war, the growth of humanitarian undertakings, etc. Two hours throughout the year. Four credits.

See also Political Science 3, 11a, and 11b.

HOME ECONOMICS.

PROFESSOR HUNTINGTON.
ASSOCIATE PROFESSOR COOPER.
ASSISTANT PROFESSOR COOK.
MISS BROWN.
MISS KERR.

DOMESTIC SCIENCE.

1. SANITATION AND FOOD. This course considers sanitation

applied to food and the simple principles of cooking and serving, It includes a study of milk, canning of fruit, cooking of eggs, meat, vegetables, fruits, and batters; proper care of the kitchen and dining room and their furnishings; and the serving of a meal. Two laboratory periods throughout the year. Four credits.

2. HOME SANITATION. A study of the sanitary considerations involved in the selection, construction and care of a house; the effect of sanitation upon the prevention of disease. Three hours, first term. Three credits.

4. THE SELECTION AND PREPARATION OF FOOD. This course considers the principles of cooking; the buying of foods; the preparation and serving of meals within a given sum of money. Prerequisite, Domestic Science 1. Two laboratory periods throughout the year. Four credits.

5. HOME CARE OF THE SICK, AND PERSONAL HYGIENE. A course intended to fit the student for conditions in home life in which professional nursing is not required; lectures on personal hygiene.

Omitted in 1912-1913.

7. HOUSE CONSTRUCTION AND SANITATION. This course includes a study of the site, construction, heating, lighting, and ventilation of the house from the standpoint of sanitation; the planning of the house with reference to site, and cost of construction; and the remodeling of houses at small cost. The laboratory work will consist of planning houses; field work; and the finishing of woods. Prerequisite, Bacteriology 1. Two lectures, one laboratory period, first term. Three credits.

8. HOUSEHOLD ART. This course deals with principles of design and color applied to interior decoration and furnishing; floor coverings, and wall hangings; furniture designs; and the use of pictures. Prerequisites, Art 2, 4, and Domestic Science 7. Two lectures and one laboratory period, second term. Three credits.

9. HOUSEHOLD ADMINISTRATION. This course deals briefly with the relation of the home to society; the modern tendencies of living; the cost of living; civic improvement; domestic service; and household management. A paper on some special topic is required. Prerequisites, Economics 2, Domestic Science 7, 8, 11. Three hours, second term. Three credits.

10. FOODS. The course includes lectures and laboratory work in the chemical composition of food; the action of heat, cold, acid, alkali upon foods; the preparation of foods; the preparation of meals and their cost. Prerequisites, Chemistry 1, Domestic Science 4. One lecture, two laboratory periods, second term. Three credits.

11. DIETETICS AND NUTRITION. This course deals with the principles of human nutrition and application of these principles to the diet of individuals and families under varying conditions of living. It includes a discussion of the metabolism of the foodstuffs; dietaries and their construction; the relation of diet to health; and the economy of food. Prerequisite, Domestic Science 10. Two lectures and one laboratory period throughout the year. Six credits.

12. ADVANCED FOODS. This course deals with the economic side of food. Some of the topics studied are: A comparison of food cooked at home and food bought ready to eat; labor saving devices for the preparation of food; and the investigating of food preparations on the market. Prerequisites, Domestic Science 10, Economics 2, Chemistry 4. One lecture and two laboratory periods, first term. Six credits.

Omitted in 1912-1913.

13. TEACHERS' COURSE IN HOME ECONOMICS. This course is designed for those students who expect to teach Domestic Science and Domestic Art. It includes a review of the Home Economics movement; a critical study of college, normal, and secondary school work from the standpoint of Domestic Science and Do-

mestic Art; practical work in planning equipments and in estimating the cost; and in teaching with supervision. Three hours throughout the year. Six credits.

Opportunity for advanced work will be offered to those students who are qualified for it.

DOMESTIC ARTS.

1. PLAIN SEWING. I. Students are taught the fundamental principles of hand and machine sewing. Practice is given in the various hand stitches; in machine sewing; in the use and care of different makes of machines; the drafting of simple patterns; and the use of bought patterns. Each student makes an apron and a suit of underwear. Eight hours, first term. Three credits.

2. PLAIN SEWING. II A continuation of course 1. The appropriate and economic use of materials is discussed. A study of the beginning of the textile industry from the historical and economic standpoint. A shirt waist and a simple wash dress are made. Eight hours, second term. Three credits.

3. DRESSMAKING. I. This course includes the making and use of patterns, and the choosing and economical cutting of materials. Each student makes a skirt and waist of woollen or silk material, and also a fitted lining. The students fit each other under the supervision of the instructor. Prerequisites, Domestic Art 1, 2, Art 2. Eight hours, first term. Three credits.

4. DRESSMAKING. II. A continuation of course 3. Each student fits and finishes a one-piece gown. Eight hours, second term. Three credits.

6. APPLIED ART. I This course deals with the application of color and design to textiles; the teaching of the fundamental stitches of needle-work; the marking of household linen; French embroidery; the designing and making of a sofa pillow cover or table runner. Prerequisites, Art 2, 4, or Domestic Science 8. Six hours, first term. Two credits.

7. APPLIED ART. II. A continuation of course 6. Six hours, second term. Two credits.

11. ADVANCED DRESSMAKING. This course includes the study of materials; their economic, artistic, and hygienic values; dress as a factor in life; history of costume; modeling in paper and crinoline from copies and original designs; the making of two costumes. Prerequisites, Domestic Art 1, 2, 3, 4, Art 4 or Domestic Science 8. Lectures and laboratory work. Eight hours throughout the year. Six credits.

13. MILLINERY. This course includes the designing, construction, and trimming of hats; the making and alteration of wire and buckram frames; the covering of frames with silk, velvet, straw or other materials; selection of materials; their suitability and durability. Prerequisite, Art 2. Lecture and laboratory work. Four hours throughout the year. Four credits.

14. TEXTILES I. The study of the beginning of the textile industry; examination of textile fibres under the microscope; the testing of manufactured materials for adulteration; and the effect of laundry reagents on textiles. Prerequisite, Chemistry 4, Botany 3, 4, Economics 2. Two lectures, one laboratory period, first term. Three credits.

15. TEXTILES. II. A continuation of course 14. The economic problems involved in the purchase of textiles, and the care of textiles in the household, including the effect of laundry reagents upon them. Prerequisite, Domestic Art 14, Two lectures, one laboratory period, second term. Three credits.

16. DESIGNING AND MODELING This course includes line and design as adapted to various figures; copying of designs in crinoline or cambric; modeling and working out of original designs in correlation with Art 13. Prerequisites, Domestic Art 11, Art 2, 4, 13. Lectures and laboratory work. Four hours throughout the year. Four credits.

Opportunties for advanced work will be offered to those students who are qualified for it.

HORTICULTURE.

PROFESSOR BATCHELOR.

1. POMOLOGY. This course is intended to give the student a scientific and practical knowledge of commercial fruit growing, selection of orchard site, planting, care and harvesting of the crop. Three lectures, one term. Three credits.

2. GENERAL HORTICULTURE. The course deals with the theory and practice of the most elementary phase of horticultural work, including a study of the fruit-bearing habits of the several horticultural crops, their propagation by cuttings, grafting, budding, etc.; the picking and packing of fruit. This is a foundation course for all other courses in horticulture. Prerequisite, Botany 1. One lecture, one laboratory period, first term. Two credits.

3. BUSH FRUITS. A study of the propagation, culture, harvesting, and marketing of small fruits, such as strawberries, currants, raspberries, grapes, etc. Attention is given to the use of these fruits in the home. Prerequisite, Horticulture 2. Two lectures, first term. Two credits.

4. VEGETABLE GARDENING. The cultivation of vegetable crops, with a consideration of soils, fertilizers, planting, transplanting, rotation, harvesting, and storage of vegetable crops for commercial and home use. Two lectures and one laboratory period, second term. Three credits.

7. SYSTEMATIC POMOLOGY. A systematic and detailed study designed to give the student a working knowledge of the varieties of fruits and nuts. Prerequisite, Horticulture 1. One lecture and one laboratory period, first term. Two credits.

8. LANDSCAPE GARDENING. A study of ornamental plants and methods of grouping the same in laying out public or private

grounds. Students are given practical experience in the propagation and care of ornamental and house plants and the construction of decorative plans for special problems. Prerequisite, Horticulture 2. Two lectures, one laboratory period, second term. Three credits.

9. HORTICULTURAL LITERATURE. A critical study and examination of books, bulletins, reports, magazine articles, etc., dealing with special horticultural subjects. Prerequisite, Horticulture 1. Three hours, first term. Three credits.

10. INVESTIGATION. Seniors in horticulture are allowed to carry on investigation in subjects in which they have special interest. Hours to be arranged with the instructor. Four credits.

11. HISTORY OF HORTICULTURE AND AGRICULTURE. A study is made of the history of the agriculture of the world. Beginning with the agriculture of mythical Egypt 2700 B.C., the development of this industry is traced through Greece, Rome, and England; and finally a general survey is made of the past and present-day agriculture of the United States. Three hours, second term. Three credits.

12. PLANT BREEDING. A study of the principles and practices of plant breeding. Variation, hybridization, and selection in their relation to plant improvement will be discussed, various methods of breeding compared, and published experimental results critically examined. Prerequisite, Agronomy 7 and 8, and Zoology 3. Three hours, one term. Three credits.

LIBRARY WORK.

MISS SMITH.

The subject includes the study of such general reference books as encyclopedias, dictionaries, atlases, cyclopedias of special subjects, indexes to periodicals and general literature, handbooks

of information, and U. S. public documents with their special catalogues and indexes. Talks are given on the classification and cataloguing of books in the library, their arrangement on the shelves, and the use of the card catalogue. The object of the course is to familiarize the student with the library and to teach him how to obtain information quickly. One hour throughout the year. Two credits.

MATHEMATICS.*

PROFESSOR J. W. JENSEN.
PROFESSOR WM. PETERSON.
PROFESSOR WEST.
MR. QUAYLE.
MR. HUMPHERYS.

2. ALGEBRA. A thorough treatment of the fundamental operations, use of parentheses, factoring, highest common factor, lowest common multiple, fractions, simple equations, inequalities, involution and evolution, theory of exponents, radicals. Five hours throughout the year. Ten credits.

3. ALGEBRA, GEOMETRY.

(a) *Algebra.* A continuation of Mathematics 2 including a thorough drill in some of the important principles of higher algebra.

(b) *Plane Geometry.* The general properties of polygons; problems of construction, and determination of areas; regular polygons and circles, with problems of construction, and methods of determining the ratio of the circumference to the diameter; maxima and minima. Special attention is given to the development of the power of logical thinking, and of accuracy and conciseness of expression.

Five hours throughout the year. Ten credits.

*A course is offered for students of mature years who are not prepared to do first year high school work. This course, Mathematics 1, consists principally of Arithmetic.

4. SOLID GEOMETRY. Three hours, one term. Three credits.

5. COLLEGE ALGEBRA. Three hours, one term. Three credits.

6. PLANE TRIGONOMETRY. Three hours, one term. Three credits.

7. ANALYTIC GEOMETRY, CALCULUS.

(a) *Analytic Geometry.* The analytic geometry of the straight line, the circle and the conic sections, including a discussion of the general equations of the second degree, and some special examples in transcendental and higher plane curves.

(b) *Differential Calculus.* The development of the fundamental principles and formulæ of the differential calculus; applications to various problems in plane geometry and analysis, such as indeterminate forms, maxima and minima, curvature, expansions of functions in series, evolutes and involutes, and curve tracing.

(c) *Integral Calculus.* Integration of various forms; development of the formulæ of the integral calculus; application in rectification of curves, quadrature of plane and curved surfaces, cubature of volumes.

Prerequisites, Mathematics 4, 5, 6. Five hours throughout the year. Ten credits.

8. DIFFERENTIAL AND INTEGRAL CALCULUS, ADVANCED COURSE. The elements of the theory of functions of imaginary variables; the various methods of integration systematically treated; the elements of the theory of the elliptic functions; the mechanical and geometrical applications of the calculus treated more fully than in course 7; and some of the more important cases of differential equations. Prerequisite, Mathematics 7. Five hours throughout the year. Ten credits.

9. DESCRIPTIVE GEOMETRY. Three hours, first term. Three credits.

10. GENERAL ASTONOMY. A first course in astronomy, consisting of lectures supplemented by field work with the telescope and transit. Three hours, one term. Three credits.

MECHANIC ARTS.

ASSISTANT PROFESSOR HANSEN.
MR. PULLEY.
MR. NEWEY.
MR. THORNLEY.

TECHNOLOGY.

1. MATERIALS. Lectures and recitations on the materials used by the pupil in his shop work. This is an introductory course given in connection with each of the shop courses and designed to give the pupil some knowledge of the materials he is handling in addition to that commonly obtained in the shop. The work will include the nature of the materials, their sources of supply, the processes involved in their production and, as far as possible, their comparative cost. Note books must be kept by the student and will occasionally be called for and examined by the instructor. One hour throughout the year. Two credits.

3. ADVANCED MATERIALS. This is similar to Technology 1 but more advanced to correspond with the work of the year. Shop note books as in course 1. Two hours throughout the year. Two credits.

4. SHOP THEORY. Instruction given by the teacher in each shop in the practical work done during that year; mathematical problems relating to the work. One hour throughout the year. Two credits.

5. STRENGTH OF MATERIALS. This is a course in the properties of materials in construction; preparation for use; tests of the strength and quality of materials; their preservation. Tests are made of chains, welded bars, riveted joints, and various kinds of structural materials. Two hours throughout the year. Four credits.

MECHANICAL DRAWING.

2. Use of instruments, geometrical construction, construction and uses of scales and drawing of articles to be made by the student in the shop. Two hours throughout the year. Two credits.

3. ADVANCED MECHANICAL DRAWING. Projection, intersections and graphical solutions of mechanical problems; special problems related to the line of shop work pursued by the pupil. Four hours throughout the year. Four credits.

4. Problems in design having reference to the student's specialty; shades, shadows and perspective. Five hours throughout the year. Four credits.

5. ELEMENTARY DESCRIPTIVE GEOMETRY. Three hours first term. Three credits.

SHOP MATHEMATICS.

This work deals specifically with the problems of woodwork, forging and machine work.

1. The application of mathematics to the solutions of such problems as arise in first year shop work. One hour throughout the year. Two credits.

4. A review of the preceding year's work, in addition to the solution of problems arising in fourth year shop work. Three hours, one term. Three credits.

WOOD WORK.

1. Elementary exercises in sawing, ripping , planing, mortising, dovetailing and general joinery, and the applications of these principles to simple furniture. Practice in making panels, sash and doors, and in simple cabinet work. Correct methods of handling and using tools are emphasized. Twelve hours throughout the year. Eight credits.

2. Plain cabinet making, wood turning and other machine work in wood and the construction of a standard carpenter's tool chest. Twelve hours throughout the year. Eight credits.

3. The principles and practice gained in the foregoing courses are applied to frame house building. Special parts, including doors, windows, casings, hips and valleys in roofs, are built in the shops. Twelve hours throughout the year. Eight credits.

4. The students in this course are allowed to specialize either in cabinet making, including carving and finishing, or in the inside finishing of houses, including work in stair building. The selection and design of the work is left largely to the student. Each design must be complete in itself and must be finished during the year. Twelve hours throughout the year. Eight credits.

FORGING AND CARRIAGE BUILDING.

1. Elementary forging with exercises so arranged as to illustrate fundamental principles: Drawing, upsetting, bending, twisting, splitting and welding are taught by making such articles as staples, bolts, timber hangers, grab hooks, clevises, stay-chains, door-hinges, and blacksmith's tongs. Practice is given in

steel and iron welds and general work in steel forging and dressing. Chisels, punches, reamers, hammers, wrenches and other tools, andirons and other ornamental iron articles are made by the students. Accuracy of method is insisted upon. Twelve hours throughout the year. Eight credits.

2. Advanced exercises in iron and steel: Axle and tire setting, resetting and tempering springs, repairing of farm machinery and wagons, advanced forging. Twelve hours throughout the year. Eight credits.

3. Wood work preparatory to carriage building, actual carriage building, including wood work and ironing. Twelve hours throughout the year. Eight credits.

4. Advanced carriage work concluding with the construction of an approved vehicle. Prerequisite, course 3. Twelve hours throughout the year. Eight credits.

HORSE SHOEING.

2. Elementary practice in making shoes, preparing the hoof and fitting; study of horse anatomy; repairing of farm tools and machinery; the making of a set of farrier's tools. Prerequisite, Forging 1. Twelve hours throughout the year. Eight credits.

3. Advanced horse shoeing. Making of special shoes intended to correct interference and other defects of gait; treatment of quarter and toe cracks, club foot, contracted heels, thrush and other diseases of the feet, with a study of means for their prevention. Prerequisite, course 2. Twelve hours throughout the year. Eight credits.

4. The application of the principles already learned to the actual work of shoeing. The student will be required to take charge of the shoeing of certain horses and keep their feet and legs in good condition. Twelve hours throughout the year. Eight credits.

FOUNDRY WORK.

1. Practice in molding and general foundry work, including iron and brass casting. The patterns chosen are mainly those for castings used in the shops. The course is intended to give a general knowledge of foundry practice. Six hours, first term. Four credits.

2. Special molding, emphasizing such work as will be required in connection with work in machine design and construction. Six hours, second term. Four credits.

MACHINE WORK.

1. Elementary forging, concluding with the making, dressing and tempering of lathe and planer tools; special work in chipping, filing, hand polishing, and scraping; preliminary exercises in drilling, planing, straight and taper turning, accompanied by instruction in the care and use of machinery. Twelve hours throughout the year. Eight credits.

2. Exercises in boring and chucking in the lathe, thread cutting, polishing and milling. Cone pulleys, bearings, stuffing box glands, grindstone shafts, gear wheels, shaft couplings, jackscrews, tap wrenches, and other small tools and machine parts. Twelve hours throughout the year. Eight credits.

3. The work of this course comprises the making of mandrels, taps, twist drills, counterborers, reamers, milling cutters, forming and cutting dies, with practice on the grinding machine; the building of machine tools and machine parts. Ten hours throughout the year. Eight credits.

4. Actual machine tool construction. A two and one-half horse-power gasoline engine was built in 1911. Twelve hours throughout the year. Eight credits.

MILITARY SCIENCE AND TACTICS.

LIEUTENANT BINFORD.

Military instruction at the College is not a matter of choice with the authorities or the students. The Congress of the United States requires this instruction in return for large appropriations; it is thus an obligation—an obligation in return for the advantages of free education.

The aim of the department is to qualify young men for positions as commissioned officers of volunteer forces. All able-bodied male students of the College are enrolled in the Military Department, during three years of their course.

A uniform must be worn by all students when at drill. Arrangements have been made by which the uniform can be obtained through the Secretary of the College at actual cost, about fifteen dollars. The attention of students intending to enter college is called to the fact that this uniform has been found more serviceable than civilian clothes of the same price, and that all must be prepared to order the uniform when they enter.

The organization conforms to the company and battalion organization of the regular army. The officers and non-commissioned officers are selected after competitive examinations. In general the officers are taken from the higher college classes, the non-commissioned officers from the lower.

A cadet band is maintained under the immediate charge of the Director of the School of Music. It appears with the cadet battalion at parades, reviews and other ceremonies.

PRACTICAL.

Four hours a week throughout the year. Required of all students during three years of their attendance. Infantry—school of the soldier, squad, company and battalion. The ceremonies of guard mounting, parade, and review; advance and rear guard; outposts; practice marches; target practice.

For target practice the college has excellent indoor and outdoor ranges. The U. S. government gives an ample allowance for ammunition.

THEORETICAL.

One hour a week throughout the year.

First Year (in the Military Department.)

Infantry Drill Regulations.
Manual of Guard Duty.

Second Year.

Infantry Drill Regulations (Review.)
A Military Primer.
Small Arms Firing Regulations.

Third Year.

Military Field Engineering.
Field Service Regulations.
Lectures on the Art and Science of War.

The satisfactory completion of both the practical and the theoretical work prescribed for any one year entitles the student to two credits.

ORGANIZATION 1911-1912.

STAFF.

MAJOR, VIRGIL L. MINEAR
ADJUTANT, E. N. MORRIS
QUARTERMASTER, SAMUEL MORGAN
CAPTAIN, BRICE MCBRIDE
CAPTAIN, A. E. MERRILL
FIRST LIEUTENANT, BERT HANSEN
SERGEANT MAJOR, LYNN ANDRUS
COLOR SERGEANT, BRYANT BULLEN
DRUM MAJOR, HARRY GREEN
CHIEF TRUMPETER, L. P. VANVORHEES

COMPANY A.

Captain, Harold R. Hagan.
First Lieutenant, Ed. J. Holmgren.
Second Lieutenant, W. S. McAllister.
First Sergeant, J. J. Farrell
Sergeants—W. J. Shackelford, R. L. Allen, Eugene Frew.
Corporals—M. W. Hendricks, R. A. Molyneaux, Grandison Gardner, Joseph C. Lau

COMPANY B.

Captain, William L. Pond
First Lieutenant, Ray H. Hougaard
Second Lieutenant, Frank E. Shurtliff.
First Sergeant. Vaughn Haws.
Sergeants—D. Earl Harris, N. F. Sammons, H. E. Jelte.
Corporals—Albert Dallof, Byron Birch, B. H. Adams, R. M. Madson.

COMPANY C.

Captain, Alfred B. Caine.
First Lieutenant, John A. Sharp.
Second Lieutenant, J. K. Peart.
First Sergeant, J. E. White.
Sergeants—E. L. Barrett, Arnold Frew, F. W. Lee.
Corporals—C. A. Osmond, Spencer Eccles, Eugene M. Caffey, J. Z. Richardson.

MODERN LANGUAGES AND LATIN.

PROFESSOR ARNOLD.
ASSISTANT PROFFESSOR G. C. JENSEN.

FRENCH.

1. FIRST YEAR FRENCH. Chardenal, *French Grammar,* and

Guerber, *Contes et Legendes*, form the basis of the grammatical and conversational work. Three or four modern texts are read, such as Dumas' *Les Trois Mousquetaires*, About's *Le Roi des Montagnes*, and *Halevy's L'Abbe Constantin*. Four hours throughout the year. Eight credits.

2. SECOND YEAR FRENCH. Francois, *French Composition* is the basis of a grammatical review and of writing in French. Lavisse's *Histoire de France* is used as subject matter for conversation, while the work in reading consists in translating works of the more important of the nineteenth century authors. During the second term a weekly composition in French is required. Prerequisite, French 1. Three hours throughout the year. Six credits

3. THIRD YEAR FRENCH. Four elective one-hour courses. a—Conversation. b—Rapid reading of French periodicals on horticulture, stockbreeding, or domestic science subjects. c—Rapid reading of French classics, varying each year. d—French periodicals on French home life. Course b may be given in two divisions to suit those who elect it. Prerequisites for all the courses, French 2. Students may elect any part or all of French 3. Each division counts two credits.

GERMAN.

1. FIRST YEAR GERMAN. Ball, *Elements of German* and Bernhardt, *German Composition*, form the basis of the grammatical and written work. Reading begins with Wenckebach's *Glueck Auf*, and is followed by three or four easy texts. Several poems are memorized. Four hours throughout the year. Eight credits.

2. SECOND YEAR GERMAN.. Bernhardt, *German Composition* is finished and work in original German composition is begun. Many texts are rapidly read, selected from the works of Riehl, Sudermann, Wildenbruch, Freytag, Heine, and other nine-

teenth century authors, together with one scientific text. Three hours throughout the year. Six credits.

3. THIRD YEAR GERMAN. Three elective one hour courses. a—Conversation, including the learning of a part in a one-act play. b—Scientific German, with private reading in different subjects according to the course of each student. c—A literary study of Heine's writings. Prerequisites for a, b, and c, German 2. Students may elect any part or all of German 3. Each division counts two credits.

SPANISH.

1. FIRST YEAR SPANISH. Giese, *First Year in Spanish,* Matzke, *First Spanish Readings*; Valdes, *Jose*; Alarcon, *El Capitan Veneno.* Three hours throughout the year. Six credits.

2. SECOND YEAR—SPANISH. Ford, Spanish Composition; Picatoste, *Historia de Espana* as basis for conversation; rapid reading of such modern texts as Valera's *Commendador Mendoza*; Galdos, *Dona Perfecta* and *Electra;* Brenton, *Quien as ella?;* and one classical play. Three hours throughout the year. Six credits.

LATIN.

1. FIRST YEAR LATIN. Collar and Daniel,*First Year Latin; Viri Romae.* Drill on essentials of Latin grammar; comparison with English grammar, acquiring of vocabulary; English words derived from Latin; selections for reading. Four hours throughout the year. Eight credits.

2. SECOND YEAR LATIN. Greenough, D'Ooge and Daniel, *Second Year Latin;* D'Ooge, *Latin Composition based on Caesar;* Bennett, *Latin Grammar;* selected readings from Part I, *Second Year Latin;* an equivalent of four books of selections from Cæsar; oral and written composition. Attention is given to etymology of English derivatives and cognates; accuracy and facility in translating into idiomatic English; sight translation. Three hours throughout the year. Six credits.

MUSIC.

PROFESSOR THATCHER.
MRS. LINNARTZ
MR. SPICKER.
MRS. SLOAN.

The following courses in music are arranged with the two-fold idea of laying a sure foundation for professional work in this art, and of fitting the student for the proper appreciation and fullest enjoyment of classic compositions of famous composers. Theory of music as exemplified in the study of harmony, counterpoint and musical form, will be considered, and as far as possible urged upon the student in both vocal and instrumental departments. Ensemble work may be had in the quartette, choir, band, and orchestra organizations. These advantages, together with those furnished by free concerts and recitals, constitute the strongest features of a Conservatory Course and will be open to all students of the College.

FOUR YEAR VOCAL COURSE. Completion of four years' regular prescribed work, together with two years of piano and one year of harmony.

FOUR YEAR PIANO COURSE. Completion of regular four years' work as prescribed, together with one year of vocal music and one year of harmony.

FOUR YEAR VIOLIN OR VIOLONCELLO COURSE. Completion of four years' regular prescribed work, together with two years of piano and one year of harmony.

FOUR YEAR COMPOSITION COURSE. Regular prescribed work, together with three years on piano, violin, cello, or cornet.

VOICE CULTURE AND ART OF SINGING.

FIRST YEAR. Breathing, study of vowel forms, elementary vocalization, easy songs.

SECOND YEAR. Vocalization, solfeggio, songs.

THIRD YEAR. Vocal studies, songs, arias, solo parts in easy operas, first year harmony, piano.

FOURTH YEAR. Advanced studies, English classic songs, German and Italian songs, arias, second year piano.

PIANOFORTE.

FIRST YEAR. Position, hand culture, rhythm, scales, elementary work from Gurlitt, Beyer, Czerny and others.

SECOND YEAR. Easy studies and sonatinas by Bertini, Clementi, Kuhlau, Kohler, Loeschorn.

THIRD YEAR. Studies by Czerny, Dorn, Hiller, Gobbært and Crœmer, Sonatas by Mozart, Haydn and others; first year voice and singing.

FOURTH YEAR. Studies by Crœmer, Kessler, Clementi *Gradus ad Parnassum*, solo pieces by Schubert, Mendelssohn Chopin, Raff and others; first year harmony.

ORGAN.

FIRST YEAR. A standard method, and easy studies and selections.

SECOND YEAR. Parallels piano course; carefully chosen selections suitable for the organ.

VIOLIN.

FIRST YEAR. David, School, Book I. Sitt Opus 35.

SECOND YEAR. David, School, Book II. Studies by Kayser; easy solos and duets; orchestra practice; first year piano.

THIRD YEAR. Kreutzer, 42 Exercises; studies by Fiorilli; orchestra; second year piano.

FOURTH YEAR. Rode, 24 exercises; Rovelli, 12 exercises; Garinni, 24 exercises; Dont, *Gradus;* concertos, Viotti, Mendelssohn, etc.; orchestra; first year harmony.

VIOLONCELLO.

FIRST YEAR. Part of Kummer's method for Violoncello with easy selections.

SECOND YEAR. Balance of Kummer's method; easy studies by Dotzauer; orchestra practice; first year piano.

THIRD YEAR. Studies by Dotzauer; pieces moderately difficult; cello parts to easy trios and quartettes; orchestra; second year piano.

FOURTH YEAR. Balance of studies by Dotzauer; pieces of more advanced grades; cello parts to trios, quartettes, etc.; orchestra; harmony.

CORNET AND OTHER BRASS INSTRUMENTS.

The course of study for these various instruments corresponds in general with that for string instruments.

MANDOLIN AND GUITAR.

FIRST TWO TERMS. First, second and third position; part of a standard method, and easy selections.

LAST TWO TERMS. Balance of method; more advanced work and *ensemble* playing.

HARMONY AND COMPOSITION.

FIRST YEAR. Goetschius, *Tone Relations;* first year of piano or other instruments.

SECOND YEAR. Advanced harmony; simple counterpoint; melody writing; second year piano, violin, etc.

THIRD YEAR. Counterpoint; smaller forms; vocal and instrumental; third year piano, violin, etc.

FOURTH YEAR. Large forms; instrumentation.

GENERAL COURSES.

The following work is open to students, without charge.
Choir and Choral Society, five hours a week. Two credits.
Band and Orchestra, four hours a week. One credit.

TUITION.

Term of fifteen weeks, payable in advance. Special students in music pay no entrance fee.

VOICE. *Private Instruction.*

Fifteen Lessons: Beginners, $15.00; Advanced, $22.50.

PIANO. *Private Instruction.*
Fifteen Lessons: First year, $10.00. Second year, $15.00

REED ORGAN. *Private Instruction.*
Fifteen Lessons: First year, $10.00. Second year, $15.00.

VIOLIN. *Private Instruction.*
Fifteen Lessons: Beginners, $15.00. Advanced, $22.50.

VIOLONCELLO. *Private Instruction, Fifteen Lessons,* $15.00.

CORNET AND BAND INSTRUMENTS.
Class Lessons. One lesson a week.....$ 7.50
Private Instruction. One lesson a week.....$10.00

MANDOLIN AND GUITAR.
One lesson a week.....$ 7.50
Two lessons a week..... 10.00

HARMONY.
Class of three, two lessons a week.....$10.00

PHYSICAL EDUCATION.

PROFESSOR TEETZEL.
MISS JOHNSON.

It is the aim of the Department of Physical Education to foster hygienic habits among the students, and so direct their exercise that they may have a physical development fit to support and make efficient the mental development which they seek in attending the institution. This is accomplished, first, by giving them the needed opportunity for gymnastic exercises; second, by encouraging athletic games, thereby stimulating an interest in their physical efficiency and in the pleasure of physical activity; and, third, by giving them a guiding knowledge of the principles of physical education. Each student is entitled to a careful physical examination, upon which, as far as possible, his work will be based. Students will be required to wear regulation gymnasium suits and shoes.

PHYSICAL EDUCATION FOR MEN.

1. ELEMENTARY COURSE. Required of all male students in the first year of the high school. Four hours a week. Two credits.

(a) *Gymnasium Exercises.* These consist of vigorous drills with dumb bells, Indian clubs, wands, etc., and gymnasium games under the supervision of the instructor. The class meets three times a week. Open to all male students.

(b) *Wrestling and Boxing.*

(c) *Swimming,* both for beginners and advanced students.

(d) *Lectures.* The gymnasium work is supplemented by lectures on personal hygiene, the physiology of exercise, first aid to the injured, etc.

PHYSICAL EDUCATION FOR WOMEN.

Two years of Physical Education are required of all High School girls of the College. All college women are required to take

at least one year's work in Physical Education. The work of the courses will be arranged to be both recreative and creative; remedial and preventive. As nearly as possible the work will be individual and based upon a physical examination. Students will be required to wear the regulation gymnasium suit and dress. The suits may be ordered through the Secretary of the College at an actual cost of about four dollars.

1. PHYSICAL EDUCATION FOR BEGINNERS. The object of this course is to establish a good posture and to strengthen vital functions. The work will consist of Swedish body building work —some tactics, folk dancing, and indoor and outdoor games.

2. PHYSICAL EDUCATION. This work is for second-year students, and will be built upon the fist year's work. It will also include work with light apparatus, advanced folk dancing, Gilbert dancing, basket ball and tennis.

3. PHYSICAL EDUCATION. An advanced course for college women. It will consist of regular formative and corrective body building work, supplemented by folk and classic dancing, apparatus work and games. It will also include lecture work on the hygiene of exercise and the principles of physical development.

PHYSICS.

PROFESSOR F. L. WEST.
MR. RICHARDSON.

1. ELEMENTARY PHYSICS. A first course in the Elements of Physics, presented mainly from the experimental standpoint. It includes a study of Mechanics, Heat, Electricity and Magnetism, Sound, and Light. The lectures are fully illustrated by appropriate experiments and lantern slides. Prerequisites, Mathematics 2, 3. Two recitations and two laboratory periods throughout the year. Eight credits.

2. GENERAL PHYSICS. A survey of the whole field of Physics, in order to lay a thorough foundation for the subsequent study of this and related subjects. Prerequisites, Physics 1 and Mathematic 6. Three recitations and one laboratory period throughout the year. Eight credits.

3. MECHANICS, MOLECULAR PHYSICS, AND HEAT. Class room and laboratory work covering selected topics in Mechanics and Heat; also the kinetic theory, capillarity, solutions, and elementary thermodynamics. Prerequisites, Physics 2 or 6 and Mathematics 7. Three hours throughout the year. Six credits.

4. ELECTRICITY, LIGHT, AND SOUND. This course is of the same grade and is conducted in the same manner as Physics 3. In addition to the work in Electricity and Sound, diffraction, dispersion, interference, and polarization of light, as well as radioactivity and the electron theory, will be taken up. Three hours throughout the year. Six credits.

5. CHEMICAL PHYSICS. Lectures and recitations on some of the fundamental laws and theories of Chemistry and Physics, including the atomic theory, kinetic theory of gases, gaseous, liquid, and solid states solutions, thermo-chemistry, electrochemistry, chemical statics and dynamics. Three lectures throughout the year. Six credits.

6. AGRICULTURAL PHYSICS. A study of those principles of Physics most useful to the student of general Biology and Agriculture and their application in these Sciences. Prerequisite, Physics 1. Two recitations and one laboratory period throughout the year. Six credits.

7. HOUSEHOLD PHYSICS. A course in applied Physics giving special attention to problems in the household. Prerequisite, Physics 1. Three hours, one term. Three credits.

8. PHYSICS OF THE ATMOSPHERE or Meteorology. A general discussion of the atmosphere, its composition and move-

ments, the nature of storms, winds, frosts, dew, cloud, fog, etc. A special study will be made of the methods of weather observations and predictions and frost warnings. Two lectures, one term. Two credits.

PHYSIOLOGY.

PROFESSOR E. G. PETERSON.

1. ELEMENTARY PHYSIOLOGY. A course intended for high school students. The structure and functions of the different parts of the human body are studied in the class room and in the laboratory. Some microscopic work is given. Two recitations and one laboratory period throughout the year. Four credits.

2. ADVANCED PHYSIOLOGY. A complete discussion of movement, sensation, circulation, respiration, digestion, absorption, metabolism, and excretion. Questions of hygiene and sanitation are discussed. Three hours, one term. Three credits.

3. DIGESTION, ABSORPTION AND METABOLISM. An advanced course in special phases of physiology. It will involve research work.

POLITICAL SCIENCE.

PROFESSOR THOMAS.
ASSISTANT PROFESSOR HENDRICKS.

1. GOVERNMENT. Our European ancestors, origin of states and state institutions, English and American governments compared, state and foreign service, the treasury, money and coinage, banks, the post office, and executive departments, legislation, the constitution, federal and state powers, political parties, party issues. Three hours throughout the year. Six credits.

2. (a) CONSTITUTIONAL LAW. The Constitution; the rise

of the Amercian Union; distribution and powers of the government; powers of Congress; powers of the Executive; the judicial departments; checks and balances of governments; government of the territory; the admission of new states; amendments to the constitution; civil rights and their guarantees.

(b). INTERNATIONAL LAW. Persons concerned, rights and duties of state, territorial jurisdiction, jurisdiction on high seas, agents of the state, nationality, treaties, settlement of disputes, war and its effects, military occupation, hostilities, neutrality, contraband blockade.

Three hours throughout the year. Six credits.

3. COMPARATIVE CONSTITUTIONAL GOVERNMENT. A Comparative study of the various systems of government,—Greece, Rome, Great Britain, Germany, France, Switzerland, United States. Three hours, second term. Three credits.

4. CONTRACTS. Assent and the necessity of its communications; offers and their expiration or revocation; consideration; contracts under seal; joint and several contracts; conditional contracts; duress; discharge of contracts by rescission; novation, accord and satisfaction; release. Three hours throughout the year. Six credits.

5. BILLS AND NOTES. Formal requisites; acceptance; indorsement; transfer; overdue paper; extinguishment; obligations of parties; checks; Negotiable Instruments Law. Three hours, first term. Three credits.

6. AGENCY. The creation and termination of the relation; nature and execution of the authority; rights and liabilities under the relation; particular classes of agents. Three hours, second term. Three credits.

7. CORPORATION LAW. Private corporations; creation of corporations; implied and granted powers of corporations; powers and liabilities of directors, stockholders, etc. Municipal cor-

porations; legislative control; rights and remedies of creditors; liabilities; power to contract on credit, borrow money and issue negotiable instruments. Three hours, first term. Three credits.

8. PARTNERSHIPS. Nature of a partnership, its purposes, and members; creation of partnerships; nature of partners' interest; firm name and good-will; mutual rights and duties of partners; liability of partners; dissolution; debts; distribution of assets; limited partnership. Three hours, second term. Three credits.

9. SALES. Subject-matter of sale; executory and executed sales; bills of lading; fraud; warranty; Statute of Frauds. Given in connection with Political Science 10.

10. MORTGAGES. Form of mortgage—legal and equitable; the substance of the mortgage; elements of the mortgage; situation of the mortgagee and mortgagor.

Three hours, first term. Three credits.

11a. MUNICIPAL GOVERNMENT. This course is a study of municipal government both in Europe and in the United States with a discussion of the problems of the large city and the small city, municipal ownership, municipal finance, proposed systems of reform, such as the Commission Plan, and other questions of this sort. Each student is required to study in detail the government of some one American city. Three hours, first term. Three credits.

11b. COLONIAL GOVERNMENT. This course takes up the history of colonial enterpise from ancient times to the present, but most stress is laid on modern colonial history. The methods of colonial administration used by the various European nations and by the United States are discussed. Three hours, one term. Three credits.

Omitted in 1912-1913.

12. IRRIGATION LAW OR THE LAW OF WATERS. This course

will treat of the right of appropriation, natural and artificial water courses, limitations of use, protection of rights, disposal of rights, percolating water, distribution of water, etc. Three hours, one term. Three credits.

STENOGRAPHY AND TYPEWRITING.

MR. CANUTE PETERSON.

STENOGRAPHY.

1. STENOGRAPHY. This is a thorough, practical course, designed for the two-fold purpose of preparing the student for actual work and also laying a foundation for rapid reporting. After the principles of the text are mastered, the dictation of various forms of commercial correspondence is taken up. Graham's Phonography, one of the most successful of the many excellent Pitmanic systems, is taught. Five hours throughout the year. Ten credits.

2. STENOGRAPHY. After a thorough review of the text books, advanced correspondence work, legal documents, speeches, specifications, editorial matter, court testimony, etc., are taken up. This course is designed especially for students who desire to qualify for the United States Civil Service, or for reporting work. A study of public meetings, court procedure and reporting of public meetings, and trials. Much transcribing on the typewriter is required. Three hours throughout the year. Six credits.

3. STENOGRAPHY. An advanced course in Stenography. Three hours throughout the year. Six credits.

TYPEWRITING.

1. TYPEWRITING. Beginning with simple exercises, the student learns correct fingering and the proper manipulation of the typewriter. Special attention is given to the care and mechanism

of the machine. Five hours a week throughout the year. Two credits.

2. TYPEWRITING. A special course for those taking Stenography. In addition to the elementary principles given in Typewriting 1, students make copies of correctly written correspondence, legal forms, ec.; also personal composition and dictation. As soon as moderate speed is attained, the work includes transcription of shorthand notes. One hour daily throughout the year. Four credits.

VETERINARY SCIENCE.

PROFESSOR FREDERICK.

1. VETERINARY ELEMENTS. This course considers briefly elementary anatomy and physiology and the common ailments of domestic animals; the most prevalent contagious diseases, their causes, symptoms, course, diagnosis and treatment; measures for their prevention and cure. The course is taught by lectures and text books, and illustrated by observation and practice in the free clinics held each week. The aim is to teach the student how to care for and treat the animals on the farm. Three hours, one term. Three credits.

2. COMPARATIVE ANATOMY. This course is prepared for students in agriculture, especially in Animal Husbandry. It consists of lectures, illustrated by skeletons and prepared specimens and models. Each student is required to perform practical work in dissection. Two lectures and one laboratory period, throughout the year. Six credits.

3. OBSTETRICS This course includes a review of obstetrical anatomy, reproduction, hygiene of pregnant animals, obstetric operations, accidents of parturition, and diseases of the young animals. The college herd and the surrounding stock breeding com-

munity give opportunity for practical work. Three hours, one term. Three credits.

5. CLINICS. Free clinics will be held at the hospital, and all students taking any of the courses in Veterinary Science are required to attend and assist in the work. This work consists of free examination and treatment of the numerous cases brought in, representing all diseases common to this section of country and furnishing the clinic with abundant material for observation and actual application of the work of the class room. Hours and credits to be arranged.

ZOOLOGY.

PROFESSOR TITUS.
MR. NELSON.

2. An elementary course in general Zoology in which by means of lectures and required reading the student obtains a general knowledge of the subject and the relation of the various groups of animals to one another. Dissections of preserved specimens are made in the laboratory, especial emphasis being laid on the gross structure and the relation of the organs in the different groups. The work commences with the Protozoans, the lowest of the invertebrates, and progresses upward through the various groups to the higher vertebrates. Two recitations and one laboratory period, throughout the year. Six credits.

3. PRINCIPLES OF BREEDING. Lectures and required reading on the biological principles underlying breeding. Especial attention is given to recent discoveries in laws of heredity and their relation to variation, selection and adaptation. Prerequisite, Zoology 2. Three lectures, one term. Three credits.

4. EUGENICS. Lectures and required reading on the principles of heredity as applied to the human race. Attention is given

to the relation of the laws studied in Zoology 3, especially those that apply to the physical, mental and moral characters of mankind which appear to be transmitted. Prerequisites, Zoology 3. Three lectures, one term. Three credits.

5. HISTOLOGY. Lectures and laboratory work on the development of the elementary tissues and a study of their microscopic structure; methods of preparing, staining and mounting different tissues. Each student is expected to prepare some tissues and mount them for study. Prerequisite, Physiology 1. One lecture and two laboratory periods throughout the year. Six credits.

Alternates with Zoology 6.

6. EMBRYOLOGY. Especial attention will be paid to the development of the chick, and at least one of the higher animals will be studied. The general principles of development will be considered, beginning with the cell and following the development through the formation of the various membranes. Lectures will be given on the development of the sense organs and other structures. Prerequisites, Physiology 1 and Zoology 2. Two recitations and one laboratory period, one term. Three credits.

Alternates with Zoology 5.

7. HIGHER VERTEBRATES. This course deals with the classification and study of the more common intermountain forms. Enough comparative anatomy work is given to make the anatomical classification intelligible. Prerequisites, Physiology 1 and Zoology 6. Two lectures and one laboratory period. Three credits.

8. ECONOMIC ZOOLOGY. Lectures on the food-habits of our common birds and injurious mammals and a thorough study of their relations to agricultural interests and of the methods of proper control. Prerequisite, Zoology 2. Three hours, one term. Three credits.

9. ANIMAL PARASITES. Lectures and laboratory work on the principal external and internal parasites of man and the do-

mestic animals; the relation of these to different diseases. Prerequisites, Zoology 2 and Entomology 1. Two recitations and one laboratory period, one term. Three credits.

10. ADVANCED EMBRYOLOGY. This is a continuation of course 6, and will take up the development of the central nervous system and the related sense organs and the order and development of the other groups of tissues in the body. Prerequisite, Zoology 6. One recitation and two laboratory periods, one term. Three credits.

Alternates with Zoology 5.

Alumni Association.

In April, 1899, President J. M. Tanner suggested to Miss Anna Beers, '98 and Charles A. Jensen, '97 the desirability of organizing all the degree graduates of the College into an Alumni association. This was the initial step in the direction of the present firmly established organization. Miss Beers and Mr. Jensen prepared, and sent to each of the 34 graduates, a circular letter urging attendance at Commencement, 1899, in order to form a society. They met with a very hearty response. Meetings were held June 13 and 14, 1899; a constitution and by-laws were discussed and adopted; and the following officers were elected: President, Lewis A. Merrill, '95; secretary, Anna Beers, '98; treasurer, Arthur Stover, '99. The following alumni have served as presidents of the association:

1899-1900, L. A. Merrill, '95.
1900-01, J. T. Caine, Jr., '94.
1901-02, W. H. Homer, Jr., '00.
1902-03, Rose Homer, '00.
1903-04, William Peterson, '99.
1904-05, J. W. Jensen, '00.
1905-06, Robert Stewart, '02.
1906-07, C. W. Porter, '05.
1907-08, J. C. Hogenson, '99.
1908-11, Christian Larsen, '96.
1911-12, C. W. Porter, '05.
1912-13, W. D. Beers, '99.

The U. A. C. Alumni Association includes all graduates who hold degrees from any of the courses in the College. It now numbers 289 living members. William Bernard Dougall, '94, Mrs. Anna Sponberg McCarty, '97; Mrs. Hermoine Hart Roberts, '97; John Simon Baker, '99, and Stanley Crawford, '00, have died. With three exceptions, all of the 294 graduates have received the degree of Bachelor of Science (B. S.), the particular course being specified in the diploma. In the first two classes, the degree of Bachelor of Civil Engineering (B. C. E.) was given, and W. B. Dougall, '94, A. B. Larsen, '94, and W. F. Culmer, '95, were graduated with this degree.

Nineteenth Annual Commencement.

June, 1912.

GRADUATES WITH DEGREES.

Bachelor of Science in Agriculture.

Agronomy.

Beers, Harry Charles.....Champaign, Ill.
Izatt, Angus.....Logan
Jones, Jenkin William.....Malad, Ida.
Martineau, Vere Loraine.....Logan
Merrill, Charles Leo.....Richmond
Morrison, John Alfred.....Franklin, Ida.

Animal Husbandry.

Caine, George Balliff.....Logan
Hill, Reuben Lorenzo.....Springville
Wilson, William John.....Eden

Horticulture.

Alder, Byron Frederick.....Manti
Alder, John Alfred.....Manti
Ball, Isaac B.....Salt Lake City
Beagley, Harry.....Nephi
Carmichael, Taylor Montgomery.....Salt Lake City
Ellison, Arthur Daniel.....Nephi
Ensign, Martin Russell.....Brigham
Schweitzer, Howard Bruce.....Brigham
Webb, Heber Jarvis.....St. George
Woolley, William George.....Salt Lake City

Irrigation and Drainage.

Israelson, Orson Winso.....Hyrum
Jennings, David Stout.....Hinckley

Commerce.

Andrews, Michael John, Jr.....Logan
Bunderson, Hervin.....Logan
Christensen, Orson Anton.....Bear River City
Cole, Truman Joseph.....Logan
Moses, Wilford Newton.....Smithfield
Osmond, James George.....Logan
Peters, John William.....Brigham
Smart, Melvin Shrives.....Salt Lake City
Smith, William LeRoy.....Logan
Stevens, LeRoy Alfred.....Logan

General Science.

Bjarnason, Lofter.....Logan
Bowen, Alice D.....Ogden
Braithwaite, George Rowland.....Manti
Day, Elizabeth Woolley.....Kanab
Funk, Annie Magdalen.....Oakley, Ida.
Gardner, Willard .....Logan
Hatch, Georgia Vivian.....Logan
Humpherys, LeGrande Rich.....Paris, Ida.
Porter, Ralph Orlando.....Porterville
Sorensen, John P.....Logan
Vickers, Wallace Joseph.....Nephi

Home Economics.

Boulton, Martha Margaret.....Park City
Cowley, Anna Leona..... .....Salt Lake City
Dunford, Alice Amelia.....Salt Lake City
Erdman, Ethel Thedora.....Brigham
Ericson, Vivian.....Salt Lake City
Hendrickson, M. Irene.....Logan
Hyde, Clara.....Logan
Nelson, Anna Eleda.....Logan

Mechanic Arts.

Aaron Newey .....Logan

GRADUATES WITH CERTIFICATES.

Commerce.

Robert Oral Hatch.....Logan
Agnes Tarbet.....Logan

Mechanic Arts.

Walter Harvey Moore.....Payson

List of Students, 1911-12.

In the following list a, stands for Agriculture; ae, for Agricultural Engineering; ho, for Home Economics; c, for Commerce; me, for Mechanic Arts; g, for General Science; m, for Music; hk, for Housekeepers' Conference; hi, for Horticultural Inspection; r, for Round-up; cor., for Correspondence Department; ss, for Summer School; G, for Graduate; S, for Senior; J, for Junior; So., for Sophomore; F, for Freshman; Sp, for Special; O, for Optional; 3, for Third Year; 2, for Second Year; 1, for First Year.

Adams, Basil Harris, a-3.....Tremonton
Adams, John Vernon, a-1.....Logan
Adams, Frank, c-1.....Layton
Adams, Kate, ho-J.....Layton
Adams, Robert Hugh, g-G.....Logan
Adams, Samuel J., r.....Layton
Aebischer, Louise, ss.....Logan
Agren, Rose E., ho-So.....Ogden
Aitkens, W. K., r.....Richmond
Ajax, Mathew Davidson, r.....Tooele
Alder, Byron F., a-S ss.....Logan
Alder, Ferdinand Cox, a-J.....Manti
Alder, F. D., r.....Preston
Alder, Conrad, r.....Providence
Alder, John A., a-S.....Manti
Alder, Mrs. Jennie, ho-F.....Logan
Aldous, Tura M., g-3.....Huntsville
Allen, A. E., ss.....Providence
Allen, Calista, ho-2.....Hyrum
Allen, Della, ss.....Hyrum
Allen, E. J. r.....Logan
Allen, H. H. Jr., r.....Clifton
Allen, Leonard a-1.....Logan
Allen, O. F., Cor.....Milner, Ida.
Allen, Margaret, ss.....Hyrum
Allen, Rose, ss.....Cove
Allen, Robert Leslie, a-2.....Logan
Allen, Spencer F., r.....Hyrum
Allen, Thomas, a-2.....Provo
Allen, Warren E., a-1.....Logan
Alman, Emil Van, r.....Milford
Almond, James, r.....Logan
Ames, Mrs. A. B., hk.....Logan
Amussen, Mabel, ss.....Logan
Amussen, Victor, ss.....Logan
Anderson, Adeline, ss.....Greenville

Anderson, Alma A., a-1.....Salina
Anderson, Alma A., a-1.....White Rock
Anderson, Andrew, r.....Logan
Anderson, Mrs. Anton, hk.....Logan
Anderson, Ella, g-2.....Alexander
Anderson, Emily, c-o.....Logan
Anderson, Frank Anton, a-1.....Smithfield
Anderson, Joseph C., me-1.....Logan
Anderson, John D., r.....Logan
Anderson, Mabel Elvina, ho-1.....Smithfield
Andreason, Alma M., g-F.....Hyrum
Andrews, Junius James, g-G.....Logan
Andrews, Michael John Jr., c-S ss.....Logan
Andrus, Lynn, ae-So.....Logan
Ashcroft, H. W .,r.....Hyde Park
Baer, Joseph R., r.....Providence
Bagley, Cyrene Neff, a-J.....Murray
Bailey, Luther Jones, me-1.....Logan
Bailey, Norval Bradshaw, a-3.....Wellsville
Baker, J. S., r.....Mendon
Baker, William, a-S.....St. George
Ball, Isaac B., a-S.....Salt Lake City
Ball, Leroy A, ss.....Logan
Ball, L. A., r.....Logan
Ballard, W. R., r.....Newton
Ballif, Leonard Lumbert, a-1.....Logan
Bankhead, Heber H., a-1.....Wellsville
Barber, Langton, c-3.....Logan
Barber, Louisa, g-Sp.....Logan
Barber, Marie, g-Sp.....Logan
Barber, Mary, ho-2.....Logan
Barber, Wynona, c-3.....Logan
Barfuss, Christian, c-1.....Logan
Barfuss, Charles, c-1.....Logan
Barber, Irvin R., r.....Newton
Barker, Joseph D., a-So.....Ogden
Barney, Malinda, ho-So.....Logan
Barrett, Edward L, a-J.....Logan
Barker, Nellie, ho-F.....Ogden
Bartlett, Allan, c-3.....Salt Lake City
Bartschi, Ernest Edward, me-1.....Providence
Bassett, Roscoe Conkling, c-3.....Lago, Ida.
Baston, Joseph, r.....Logan
Bateman, Ellen D., ss.....Sandy
Bates, George F., ae-F.....Monroe
Batt, Ruby, c-Op.....Logan
Batt, William, a-Sp.....Logan
Baxter, Mrs. Sarah, hk.....Wellsville
Beagley, Harry, a-S.....Nephi
Beagley, LeRoy, g-G.....Wellsville
Bean, Lee Addison, a-2.....Provo
Bearnson, Julius, c-J.....Spanish Fork
Beers, Harry Charles, a-S.....Logan

Behling, John William, a-2.....Ferron
Bell, Alfred J., r.....Logan
Bennett, Malter, r.....Eden
Bennett, Thomas L., me-1.....Kilgore
Bennett, Mervin, r.....Hooper
Bennion, Edwin Arthur, a-1.....Salt Lake City
Bennion, Edwin, r.....Logan
Bennion, Heber, Jr., a-J.....Salt Lake City
Bennion, Heber, r.....Salt Lake City
Bennion, Lavon, ho-1.....Logan
Bennion, Marcus Leslie, a-1.....Calder's Station
Bennion, Mary, ho-F.....Salt Lake City
Bennion, Mrs. Mary E., hk.....Salt Lake City
Bennion, Theron Wilson, a-J.....Sandy
Benson, Andrew, r.....Murray
Benson, F. A., r.....Logan
Benson, Gretta, ho-F.....Helena, Mont.
Benson, George T., Jr., r.....Whitney, Ida.
Benson, Mrs. Serge B., hk.....Whitney, Ida.
Bergsjo, James Albert, c-3.....Logan
Berry, Eva, g-Sp.....Logan
Bindrup, Erval, me-1.....Millville
Bigelow, Gwen, c-2.....Millville
Bingham, B. F., r.....Logan
Bingham, Francis, r.....Huntsville
Bingham, P. P., r.....Smithfield
Bingham, Sanford L., a-Sp.....Logan
Bingham, Wilford H., a-2.....Riverdale
Birch, Byron, a-3.....Hoytsville
Bird, Vern, a-J.....Springville
Bitter, Joseph, r.....Beaver Dam
Bjarnason, Lofter, g-S, ss.....Logan
Bjork, Annie, c-3.....Murray
Bjork, Nettie, ho-2.....Murray
Bjorkman, Arthur Eugene Alex., c-1.....Logan
Bjorkman, Carla, a-ho-1.....Logan
Blake, Angus M., c-1.....Spring City
Blake, James Platt, a-1.....Riverton
Blair, Millington, a-1.....Logan
Borgeson, Bernard, c-1.....Logan
Boswell, Stephens, r.....Nephi
Boulton, Margaret Martha, ho-S.....Park City
Bowen, Alice, g-S, ss.....Ogden
Bowman, Albert E., a-G.....Logan
Bowman, Mrs. Mamie B., ho-Sp, ss.....Logan
Boyer, DeWitt Angus, g-Sp.....Mendon
Bracken, Aaron F., a-J.....Stockton
Bradshaw, Daniel Walter, a-3.....Wellsville
Bradshaw, William Bertie, a-1.....Hurricane
Brady, H., r.....Logan
Braithwaite, George R., g-S, ss.....Manti
Brewton, R. W., ss.....Provo
Breitenbucher, Minnie, ss.....Murray

Briton, Wollerton, ss.....Murray
Brossard, Howard, g-3.....Logan
Brossard, Rolland Elmer, s-J.....Logan
Brown, Benjamin, cor.....Gunnison
Brown, Dean, c-1.....Salina
Brown, Hans J., ss.....Mt. Pleasant
Brown, Mark C., h-Sp, ss.....Salt Lake City
Buck, John William, c-J.....Park City
Bullen, Bryant, a-So.....Richmond
Bullen, Edith, ho-So.....Logan
Bunce, Mabel, c-1.....Logan
Bunderson, Bert, r.....St. Charles
Bunderson, Hervin, c-S.....Logan
Burke, Asahel W., g-J.....Cedar City
Burnham, Callie, ss.....Logan
Burnham, Caroline, ho-2.....Logan
Burnham, Ivie, ho-S.....Logan
Burns, Retta, c-Op.....Logan
Bywater, Lillie, ss.....Brigham
Caffey, Eugene M., g-2.....Logan
Caine, Alfred Ballif, a-So.....Logan
Caine, Arthur Hugh, a-F.....Logan
Caine, George Ballif, a-S.....Logan
Caine, Lawrence Ballif, r.....Logan
Cahoon, George E., a-F.....Murray
Campbell, Hopkins B., me-1.....Providence
Cannon, Clawson Young, a-So.....Salt Lake City
Cannon, Mrs. Margaret, hk.....Logan
Cardon, Mrs. J. E., hk.....Logan
Cardon, Veda, ho-3.....Logan
Carlisle, Easton, me-1.....Logan
Carlisle, H. C., r.....Calder's Station
Carlisle, John W., r.....Heber
Carlisle, Lewis Wm., a-1.....King
Carlson, Ezra, r.....Logan
Carlson, Marie, ho-J.....Ogden
Carmichael, Taylor M., a-S.....Salt Lake City
Carlson, Raymond Wilford, c-F.....Logan
Carrington, Mrs. Albert C., ho-F.....Logan
Carrington, Albert C, g-Sp.....Logan
Carroll, LeRoy Edward, a-2.....Vernal
Carson, LaRu, ho-2.....Richmond
Carter, Ezra, a-J.....Logan
Carter, James Irvin, c-3.....Park Valley
Carter, Wesley J., m.....Logan
Cartwright, William J., c-Op.....Beaver City
Chambers, A. B., r.....Smithfield
Champ, Frederick Percival, me-Sp.....Logan
Chantrill, Mrs. James, hk.....Benson
Chantrill, Mrs. William, hk.....Benson
Chatterton, Jesse, c-1.....Salt Lake City
Cheney, Aaron B., c-1.....Logan
Chipman, Florence, ss.....American Fork

Chillis, William A. N., r.....Franklin, Ida.
Christensen, Axell, a-So.....Monroe
Christensen, Grover, r.....Hyrum
Christensen, Florence, hk.....North Logan
Christensen, Hyrum, r.....Tremonton
Christensen, Inez, ho-Op.....Logan
Christensen, James A., ss.....Brigham
Christensen, James P., r.....Elwood
Christensen, Joseph, r.....Gunnison
Christensen, Mrs. Mary, hk.....Logan
Christensen, Nephi, r.....North Logan
Christensen, Nephi, r.....Newton
Christensen, Orson A., c-S.....Bear River City
Christensen, Oswald, g-Sp.....Logan
Christensen, W. W., r.....Tremonton
Christensen, Wilford W., r.....Tremonton
Christiansen, Archie L., a-So, ss.....Fountain Green
Christiansen, Hans A., ss.....Nephi
Christiansen, John Marinus, a-1.....Gunnison
Christiansen Randall, a-2.....Moroni
Christiansen, Roy Oldroyd, c-2.....Fountain Green
Christiansen, Gladys, c-3.....Logan
Christiansen, Irma Vivian, g-2.....Logan
Christoferson, H. C., r.....Richmond
Churchman, Edith Maria, ho-1.....Fish Haven
Churchman, Raymond, c-1.....Fish Haven
Clark, William L., g-J.....Provo
Clawson, A. J., g-Sp.....Hyrum
Clayton, Mrs. Christine, ho-F.....Salt Lake City
Clayton, Irving E., a-3.....Salt Lake City
Chugg, W. J., r.....Providence
Clark, Edward J., ss.....Logan
Clark, Ernest, r.....Benson
Clark, Mrs. Emma, hk.....Morgan
Clark, E. B., r.....Farmington
Clark, Charles R., r.....Georgetown, Ida.
Clark, Harold G., r.....Morgan
Clark, Joseph S., r.....Farmington
Clark, Nathan, r.....Farmington
Clark, Rebecca, ss.....Logan
Clark, H. W., r.....Farmington
Clark, W. W., r.....Montpelier, Ida.
Clawson, Leo B., g-Sp, ss.....Providence
Clawson, Mrs. Mary, hk.....Preston
Clegg, O., r.....Riverton
Clegg, Robert Mrs., hk.....Bench
Clifford, J. B., r.....Logan
Clyde, Grover, a-So.....Springville
Clyde, H. S., r.....Springville
Clyde, Grover, a-So.....Springville
Cole, Jean, g-Op.....Tremonton
Cole, Ira A., a-Sp.....Logan
Cole, Truman Joseph, C-S.....Logan

Comish, Tilla, c-1.....Logan
Cook, Joseph N., r.....Garden City
Cook, William, r.....Hyde Park
Coombs, D. R., g-Sp, ss.....Salt Lake City
Cooper, Mrs. Nellie, hk.....Logan
Corinne, H. T., cor.....Tooele
Cowley, Charles H., c-3.....Logan
Cowley, C. W., r.....Venice
Cowley, I. Abner, c-So.....Venice
Cowley, James A., r.....Arno
Cowley, John W., r.....Logan
Cowley, Laura, ho-So.....Logan
Cowley, Leona Anna, ho-S.....Salt Lake City
Cowley, William M., r.....Venice
Cox, D. J., r.....Logan
Cragun, Dresden, a-2.....Smithfield
Cragun, LaVon, g-So.....Smithfield
Cramer, Erick Adolph, a-2.....Huntsville
Crane, Heber Leon, a-1.....Riverton
Crawford, Blythe, g-F, ss.....Corinne
Crawford, Grant, a-2.....Manti
Crawford, Helen Audrey, g-1.....Corinne
Crandall, Russell, a-J.....Springville
Crockett, Eva., c-3.....Logan
Crockett, Irma, ho-1.....Logan
Crookston, Byron, a-2.....Logan
Crookston, Carl, r.....Logan
Crookston, Laurn, a-1.....Logan
Crookston, N. O., r.....Logan
Crookston, Newell J., r, cor.....Logan
Crookston, Robert Burns, me-3.....Logan
Crookston, Spencer C., a-1.....Logan
Crothers, Mrs. W. H., ss.....Logan
Crouse, J., r.....Rawlins
Cummings, Byron, r.....Salt Lake City
Cummings, W. D., r.....Kaysville
Dahl, Lorin, r.....Salt LakeCity
Daines, LaVere, a-1.....Franklin, Ida.
Daines, Mervin Robert, a-2.....Hyde Park
Daines, N. G., r.....Preston, Ida.
Dalby, Ivan C., ss.....Levan
Dalley, Milton F., r.....Logan
Dalley, John E., r.....Logan
Dallof, Albert, c-F.....Smithfield
Dalton, William Shanks, a-So.....Willard
Daniels, Madella, ho-3.....Logan
Danielson, Marie, ho-1.....Lewiston
Danielson, Rose, ss.....Paradise
Dansie, Ivy J., ho-1.....Riverton
Darley, John G., r.....Wellsville
Darley, Mrs. Mayme, ho.....Wellsville
Davenport, Ethel, ho-J, ss.....Manti
Davidson, Amesa, ss.....Ft. Bridger

Davidson, Edith, ss.....Logan
Davidson, Martha, ss.....Logan
Davidson, Peter Edward, a-1.....Logan
Davidson, Hans Arthur, me-2.....Logan
Davis, Ruby, ho-2.....Brigham City
Day, Mrs. Bessie, g-S, ss.....Kanab
Dean, Amelia, ho-F.....Beaver
DeLaMare, Thurman, c-1.....Ogden
Dewey, J. Leland, ss.....Deweyville
Diehl, Erastus Jordan, a-1.....Logan
Dick, Ethel, ho-2.....Logan
Dixon, Asael H., a-J.....Logan
Dixon, George A., r.....Garland
Dollar, John William, c-.....Salt Lake City
Dorrien, Carlton, c-So.....Soda Springs
Douglas, Stanley, a-1.....Payson
Duffin, James G., r.....Provo
Duffin, Mrs. A. C., hk.....Bountiful
Doutre, William, c-2, ss.....Montreal, Canada
Dunford, Alice, ho-S, ss.....Salt Lake City
Dunford, Mrs. A. B., hk.....Bloomington, Ida.
Dunford, A. B., r.....Bloomington, Ida.
Dunford, Bailey, me-2.....Logan
Dunford, George Marlin, c-1.....Logan
Dunford, Logan, me-2.....Logan
Dunkley, L. R., cor.....Whitney, Ida.
Dunn, Martha, cor.....Tooele
Dunn, Harriet, ss.....Logan
Duke, Earl, me-1.....Santaquin
Duke, Verne, me-1.....Santaquin
Eames, David G., r.....Preston, Ida.
Eames, Nathaniel Howard, a-1.....Logan
Eames, Aerial G., a-J.....Preston, Ida.
Earl, Ira Joseph, c-2.....Bunkerville, Nev.
Earl, Leo Charles, a-2.....Fielding
Eccles, Jessie, ho-2.....Logan
Eccles, Marie, g-Sp.....Logan
Eccles, Spencer, g-2.....Logan
Edlefsen, Edlef, a-3.....Logan
Edlefsen, Evelyn, c-1.....Logan
Edlefsen, Lawrence, c-1.....Logan
Edlefsen, Victor, c-1.....Logan
Edwards, Allen, r.....Logan
Edwards, Franklin R., me-1.....Logan
Edwards, Mae, ho-So.....Logan
Egbert, Delmar, c-1.....Logan
Egbert, Ivan, g-G.....Logan
Eldredge, Ben R., r.....Salt Lake City
Eldredge, Gerold Ray, c-1.....Woods Cross
Ellertson, Jesse Norman, c-So.....Mona
Ellertson, Roy Ephraim, a-1.....Mona
Elison, Melvin E., c-1.....Oakley, Ida.
Ellison, Arthur Daniel, a-S.....Nephi

Emerson, Tro, A-Sp, ss.....Logan
Ensign, Martin Russell, a-S.....Brigham
Erdman, Ethel, ho-S, ss.....Brigham
Erickson, Albin, r.....Mink Creek
Erickson, Emil Theodore, a-3.....Murray
Ericson, Vivian, ho-S.....Salt Lake City
Evans, Benjamin William, a-1.....Logan
Evans, Mrs. Emma J., hk.....Logan
Evans, Lawrence Hyde, g-Op.....Nephi
Evans, Wiliam Owen, a-1.....Logan
Evans, William, r.....Logan
Everton, Mrs. J. E., hk.....Logan
Fackrell, Cyrus, r.....Riverside
Farrell, George L., r.....Smithfield
Farrell, Gladys, ss.....Logan
Farrell, James Joseph, a-2.....Salt Lake City
Farrell, Lola, ho-2.....Smithfield
Farnsworth, Karl, a-So.....Logan
Felt, Hazel, ho-J .....Huntsville
Felt, Joseph Edgar, a-2.....Huntsville
Field, John Franklin, a-1.....Logan
Fife, Lewis, r. .....Providence
Fister, George M., g-J.....Logan
Fonnesbeck, Lydia, m, ss.....Logan
Fonnesbeck, Luna, ss.....Logan
Foote, John, cor.....Nephi
Forgensen, Alice, ss.....Brigham
Foster, Edna, ho-2.....Logan
Foster, Mrs. E. F., hk.....Mendon
Foster, Joseph Downing a-J.....Logan
Foster, Winnifred, ho-1 .....Logan
Fowler, Benjamin A., g-S.....Logan
France, Horace R., me-1.....Peterson
France, Marlin, me-1.....Farmington
France, P. M., r.....Farmington
Frank, Louis, r.....Providence
Fraser, E. W., g-Sp, ss.....Salt Lake City
Fraser, Mrs. Mamie, ss.....Salt Lake City
Frederick, Lillie, hk.....Providence
Frederick, K. H., r.....Tremonton
Frew, Arnold, a-3.....Hooper
Frew, Cecil, a-3.....Hooper
Frew, Eugene, a-So.....Hooper
Frew, John T., r.....Hooper
Frodsham, Mary, ho-3.....Logan
Fuhriman, Godfrey, r.....Providence
Fuller, Lily, ho-1.....Eden
Fuller, Lyda, m.....Eden
Fuller, Robert E., a-1.....Eden
Funk, C. L., r.....Richmond
Funk, Magdalen, g-S.....Oakley, Ida.
Funk, William O., c-1.....Logan
Funk, W. J., r.....Benson

Gates, Franklin Young, me-2.....Salt Lake City
Gardner, Anthony Snow, a-3.....Pine Valley
Gardner, Erastus Snow, a-1.....Pine Valley
Gardner, Fernleigh, a-1.....Pine Valley
Gardner, Grandison, a-3.....Pine Valley
Gardner, John A., r.....Logan
Gardner, Marie, ho-2.....Logan
Gardner, Willard, g-S.....Logan
Garff, Reginald W., a-2.....Draper
Garff, R. N., r.....Draper
Garner, William, me-1.....Huntsville
Garrett, Louis, r.....Nephi
Geddes, Joseph A., g-Sp.....Preston, Ida.
Gibbon, Ola, ss.....Logan
Gibbs, W. H., r.....West Portage
Glenn, Walter John, a-J.....Logan
Godbe, Lawrence J., a-So.....Salt Lake City
Goldbrandsen, Hazel, c-O.....Logan
Golding, Loren, c-1.....Wellington
Gonzalez, Marrique R., a-Sp.....Logan
Goodwin, Robert, c-1.....Trenton
Goodwin, Charles H., a-3.....Logan
Goodwin, Nettie, g-So.....Logan
Gorton, Eastman Kenneth, me-1.....Logan
Goodspeed, William E., s-So.....Salt Lake City
Grace, C. H., r.....Nephi
Grant, Fred F., a-2.....Salt Lake City
Grant, George M., r.....Hyde Park
Grant, Henry Charles, me-1.....Lovell, Wyo.
Grant, Mary A, ss.....Logan
Gray, Edwin M., me-2.....Elsinore
Gray, Francis Chanty, g-2.....Perry, Ida.
Greaves, Card, c-2.....Preston, Ida.
Greaves, William C., r.....Logan
Green, Harry Melvin, a-2.....Salt Lake City
Green, George Edward, g-1.....Logan
Green, Mark Hindley, a-J.....American Fork
Greenwood, Aaron, a-F.....American Fork
Greenwood, E. M., cor.....Elsinore
Greenwood, Josie, ss.....American Fork
Greenhalgh, Truman, c-1.....Logan
Greenhalgh, Violet, ho-J.....Logan
Griffin, Amos, R., a-So.....Newton
Groebli, Elizabeth, c-F, ss.....Logan
Groebli, Jacob, me-2.....Logan
Groebli, Gladys, ho-1.....Logan
Grover, James Millard, me-2.....Garland
Grover, Thomas Odell, a-1.....Garland
Grow, J. W., r.....Huntsville
Guldbransen, Julius, c-1.....Logan
Gunn, Klea M., ho-1.....Hoytsville
Gunnell, Mrs. Elsie, hk.....Logan
Haddock, Don Carlos, g-J.....Logan

Haddock, Lon J., a-J.....Salt Lake City
Hagan, Mrs. Blanche Y., ho-F.....Logan
Hagan, Harold R., a-F.....Salt Lake City
Hale, Albert H., r.....Island
Hale, Edward Everett, a-3.....Salt Lake City
Hale, Lynn H., c-1.....Logan
Halgren, Denzil Anbamy, c-2.....Franklin, Ida.
Halgren, Rene Charles, me-2.....Logan
Hall, A. C., r.....Whitney, Ida.
Hall, John C., cor.....Robinson
Hallock, Edwin S., g-Sp.....Salt Lake City
Hailstone, John Leland, a-2.....Logan
Hammond, Alta, ho-F.....Logan
Hammond, Andrew H., r.....Providence
Hammond, E., r.....Logan
Hammond, Ervin Arthur, a-1.....Logan
Hammond, Diantha, a-Sp.....Providence
Hammond, Floyd, g-3.....Logan
Hammond, Horton, r.....Metropolis, Nev.
Hancy, Henry E., r.....Hyde Park
Hansen, Albert Levi, C-So.....Idaho Falls, Ida.
Hansen, Alma Wilford, a-O.....Logan
Hansen, Elva R., ho-1.....Logan
Hansen, Charles F., g-J.....Leeds
Hansen, C. J., r.....Garland
Hansen, E. S, r.....Garland
Hansen, Lee Albert, a-1.....Logan
Hansen, George D., r.....Providence
Hanson, Guy E., a-F.....Logan
Hansen, Henry Lloyd, a-J.....American Fork
Hansen, Heber, r.....Hyrum
Hansen, Helvia, ss.....Logan
Hansen, John T., r.....Logan
Hanson, Junius, a-1.....Brigham
Hansen, Mrs. Reuben, hk.....Logan
Hansen, Simeon, cor.....Browning, Mont.
Hansen, Sylvester, r.....Hyrum
Hanson, W. S., r.....Collinston
Harding, George D., ss.....Logan
Hardy, Minnie, cor.....Tooele
Harris, A. E., r.....Richmond
Harris, David Earl, a-3.....Logan
Harris, D. E., r.....Provo
Harris, J. P., cor.....Grayson
Harris, Martin Lot, a-So.....Monroe
Harrington, Daniel Taylor, a-1.....Salt Lake City
Harrison, B. H., cor.....Lay, Colo.
Harper, W. F., r.....Smithfield
Hansen, Hyrum, me-1.....Paradise
Hansen, Reuben, a-3.....Hyrum
Haslam, James E., c-J.....Wellsville
Hatch, Ella, g-Sp.....Logan
Hatch, J. E., r.....Randolph

Hatch, Robert O., c-3.....Logan
Hatch, Joseph Eastman, g-2.....Logan
Hatch, Georgia Vivian, g-S.....Logan
Hatch, Lorenzo Hill, c-3.....Logan
Haycock, Frank, c-3.....Logan
Haycock, William Dawson, a-1.....Panguitch
Hawkes, Frank Carter, ss.....Logan
Hawkes, Mrs. F. C., ss.....Ogden
Hawkes, Nellie, ss.....Ogden
Haws, Francis O., ss.....Garland
Haws, Vaughan, a-F.....Garland
Hawkes, LeGrande, g-2.....Logan
Hayball, Edith, g-Sp.....Logan
Hayball, Lucile, ho-Sp.....Logan
Hendricks, Marriner William, a-3.....Logan
Hendricks, Marriner Willis, ae-2.....Richmond
Hendricks, Odessia S., g-G.....Richmond
Hendricks, Walstein, g-3.....Lewiston
Henderson, Charles Cliff, c-1.....Richmond
Henderson, M. Irene, ho-3.....Logan
Hendricks, W., r.....Logan
Hess, George M., a-So.....Richmond
Hewlett, J. S., r.....Farmington
Hewlett, E., r.....Morgan
Hickenlooper, Frank, a-3.....Pocatello
Hickenlooper, Orson H., ss.....Ogden
Heinrick, George, c-2.....Ogden
Heldberg, Gustof O., g-2.....Smithfield
Heldberg, Richard Ever, a-1.....Logan
Hendricks, Brigham Victor, a-1.....Logan
Hendricks, Iris, ho-2.....Lewiston
Hendricks, Jessie, ss.....Richmond
Hendricks, J. W., r.....Richmond
Hendricks, John Allen, ae-1.....Richmond
Hendricks, S. F., g-Sp.....Logan
Hickman, Joseph, g-J, ss.....Richmond
Hill, Edith, ss.....Logan
Hill, Reuben Lorenzo, a-S.....Franklin
Hill, Mrs. Mary T. S., ho-Sp.....Springville
Hill, William Martin, a-1.....Logan
Hillyard, William r.....Millville
Hillyard, Inez, ss.....Smithfield
Hillman, Alice, ss.....Smithfield
Hillman, Ben Ira., a-1.....Salt Lake City
Hillman, Clarence Lynn, me-1.....Pleasant Grove
Hill, William S., a-1.....Sunny Dell, Ida.
Hillhouse, LeGrand, a-1.....Wellington
Hinkley, Charles Oscar, me-1.....Logan
Hirst, Charles Tarry, g-G.....Ogden
Hyer, A. L., r.....Logan
Hobush, Wilhelmina Romania, ho-1.....Lewiston
Hodson, Edith, ho-3.....Logan
Hoyt, James F., cor.....Ogden

Holden, Mittie, ho-So.....Logan
Holden, Susie, ho-So.....Salt Lake City
Holleck, Edwin S., ss.....Salt Lake City
Holmgren, Andrea, ho-So.....Bear River City
Holmgren, Edwin J., a-So.....Bear River City
Holmgren, J. P., r.....Bear River City
Holmgren, Mabel, ho-So.....Bear River City
Hopkins, Ella, ss.....Kanab
Horne, Florence, ss.....Richfield
Horsley, Lew Kenneth, c-1.....Soda Springs
Hoskins, William Henry, ss.....Wellsville
Hougaard, Frank N., a-1.....Manti
Hougaard, Wilford R., a-So.....Manti
House, David, r.....Corinne
House, R. R., r.....Corinne
Hovey, Izene, ho-3.....Millville
Hovey, A. R., g-Sp, ss.....Millville
Hovey, Sidney G., c-3.....Millville
Howell, Mary, g-J.....Logan
Howells, Bernice, c-1.....Logan
Howells, Byron, c-1.....Logan
Hubbard ,C. W., r.....Lago, Ida.
Huff, Mary Elva, ho-3.....Salt Lake City
Huffaker, Rausel Vernon, a-So.....Tooele
Hughes, Katherine, hk.....Logan
Huish, Royal C., c-1.....Garland
Hulet, Moses Arthur, a-3.....Summit
Humpherys, George, m.....Ogden
Humpherys, Le Grande, g-S.....Logan
Humpherys, Joseph, r.....Paradise
Humpherys, T. G., r.....Salina
Hunsaker, LeGrande, a-J.....Honeyville
Hunsaker, E., r.....Honeyville
Hunsaker, Veda, ho-J.....Honeyville
Hurren, Mrs. Maggie, hk.....Hyde Park
Hutcheons, Alice Taylor, c-2.....Hayden
Hutchings, A. J., ss.....Nephi
Hutchings, Lawrence Smith, c-1.....American Fork
Hutteballe, Maria, ss.....Logan
Hutteballe, Sarah, ss.....Logan
Hurst, Hazen, a-1.....North Logan
Hurst, Hugh, a-1.....Logan
Hyde, Beth, ho-2.....Logan
Hyde, William, r.....Logan
Hyde, Wilford A., r.....Logan
Hurst, Winfield, a-2.....Logan
Hyde, Clara, ho-S.....Logan
Ingram, Alonzo, cor.....Nephi
Izatt, Irene, ss.....Logan
Izatt, Angus, a-S.....Logan
Isaacson, Carl, hi.....Brigham
Isaacson, May, ho-So.....Brigham
Israelson, A. M., r.....Hyrum

Israelson, Mrs. Jennie A., hk.....Logan
Israelson, Orson W., a-S.....Hyrum
Ivans, Anthony, r.....Salt Lake City
Jacobs, Hyrum L., a-2.....Garfield
Jackson, David, r.....Randolph
Janson, Gilbert L., c-J.....Gunnison
Janson, John A., me-2.....Gunnison
Jelte, Harlow, me-3.....Smithfield
Jensen, Aaron, r.....Geneva
Jensen, Clinton, c-1.....Logan
Jensen, Doyle, r.....Basalt
Jensen, Ethel, m.....Logan
Jensen, Esther, hk.....South Jordan
Jensen, Alma Lawrence, a-1.....Millville
Jensen, Clarence C., cor.....Brigham
Jensen, Harvey, r.....Hyrum
Jensen, Kate, ss.....Millville
Jensen, Olive, ho-J.....Brigham
Jensen, H. E., cor.....Nephi
Jensen, Otto, hi.....Logan
Jensen, Heber Leroy, a-2.....Sandy
Jensen, Norman, a-J.....Brigham
Jennings, David, a-S.....Hinckley
Jennings, Mrs. Retta, hk.....Logan
Jeppeson, Norman, r.....Hyrum
Jessop, Richard, r.....Millville
Johansen, Leo Walter, me-1.....Huntsville
Johns, William, r.....Salt Lake City
Johns, David J., cor.....Ogden
Johnson, Floyd, a-F.....Hyde Park
Johnson, Mrs. Alice, ss.....Corinne
Johnson, C. W., cor.....Ephraim
Johnson, C. W., ss.....Nephi
Johnson, Eric A., c-So.....Logan
Johnson, Mrs. Farrell, hk.....Logan
Johnson, F. D., r.....Tremonton
Johnson, Lola, ho-2.....Spring City
Johnson, Mabel, ss.....Logan
Johnson, Mark S., c-2.....Holden
Johnson, Myrtle I., ho-J.....Logan
Johnson, Oliver, r.....Logan
Johnson, Ruth, ho-3.....Logan
Johnson, Samuel, cor.....Tooele
Jolley, Loftus, c-2.....Emmett, Ida.
Jones, David W., g-3.....Logan
Jones, Jenkin W., a-S.....Logan
Jones, John Lewis, ae-F.....Monroe
Jones, Lawrence, c-F.....Malad, Ida.
Jones, Rose, ss.....Logan
Jones, Owen Evans, a-1.....Logan
Jones, William Leroy, cor.....Fillmore
Jonsson, Elmer, g-J.....Logan
Jonsson, Reuben, g-1.....Logan

Jorgensen, Isaac, r.....Logan
Jorgensen, L. A., r.....Etna
Jorgensen, Isaac, r.....Logan
Jorgensen, Mervin, r.....Logan
Jorgensen, N., r.....Hyrum
Jorgensen, Stella, ss.....Benson
Jorgensen, Quinn A, r.....Logan
Juel, Einor Arnold, g-1.....Logan
Judd, Samuel Howard, a-F.....St. George
Judd, John A., hi.....LaVerkin
Justesen, Leroy, a-1.....Deseret
Keller, Joseph, r.....Logan
Kendrick, George r.....Providence
Karren, Fred Harold, a-1.....Logan
Keaton, George D., g-Sp.....Logan
Kewley, Alice, ss.....Logan
Kewley, Robert J., a-J.....Logan
Keller, Irvine, c-1.....Logan
Kerr, Gerold, a-J.....Logan
Kidman, Lillie, ho-1.....Petersboro
Kidman, Lyman, ae, So.....Petersboro
Kimball, Mrs. M. W., hk.....Logan
Kimball, Delbert G., ae-1.....Salt Lake City
King, Eliza, ho-3.....North Logan
Kirby, Gordon, a-J.....Salt Lake City
Kirkbride, J. W., g-Sp.....Smithfield
Kirkbride, Lilas, g-3.....Smithfield
Kloepfer, Rachel, ho-2.....Logan
Knudson, Ivy E., ho-J.....Brigham
Knudson, William Warren, a-J.....Brigham
Korupkat, Tirzah, g-So.....Logan
Korupkat, Winnifred, g-2.....Logan
Kresie, William, r.....Providence
Kropfer, Mrs. Hannah, hk.....Logan
Lamb, Lavon George, a-1.....Hyde Park
Lamb, George L., r.....Hyde Park
Lamb, John J., r.....Hyde Park
Lamb, S. E., r.....Hyde Park
Lariscy, Maud, c-So.....Logan
Larsen, Elliott, me-3.....Monroe
Larsen, Anna Estella, ho-1.....Logan
Larsen, Charlotte Anderson, ss.....Logan
Larsen, Servin Daniel, a-2.....Hunter
Larsen, John, r.....Newton
Larsen, Joseph Reuben, ss.....Logan
Larsen, Guy Taylor, a-1.....Logan
Larsen, Hazel, hk.....Logan
Larsen, N. J., r.....Hyrum
Larsen, Oliver, r.....North Logan
Larsen, Rudolph V., g-Sp, ss.....Smithfield
Larsen, Ruth, ho-3.....Spring City
Lau, Joseph C., c-3.....Logan
Lau, Ritha, ho-So.....Logan

Lamb, George W., r.....Logan
Laurenson, Edward J., c-So.....Logan
Lauritzen, John Ivan, a-F.....Moroni
Leatham, Howard P., a-3.....Wellsville
Lee, Fay Warren, a-So.....Hoytsville
Lee, Hazel, ho-3.....Logan
Lee, Lucile, ho-J.....Hoytsville
Lee, Winnifred, ho-J.....Hoytsville
Leishman, Laura, ss.....Millville
Lemmon, A. A., r.....Paradise
Lemmon, Adelia, ss.....Mendon
Lewis, Grover, a-2.....Logan
Lewis Marion, c-2.....Logan
Liddle, E. J., r.....Salt Lake City
Lindsay, Walter A., g-G.....Logan
Lindquist, Ariel, g-1.....Logan
Lister, Elsa L., cor.....Huntington
Lloyd, Mrs. C. A., hk.....Alexander
Lloyd, Chas. A., r.....Alexander
Lloyd, Ellis, r.....Alexander
Lloyd, Parley, r.....Alexander
Lofthouse, J. T., r.....Paradise
Loosle, William J., me-1.....Clarkston
Lorentzen, Eden Christian, a-1.....Salina
Loveland, Chancey, ss.....Logan
Loveland, David C., g-S.....Logan
Loveland, Harvey Ray, a-1.....Logan
Low, Frank, a-S.....Beaver
Lowe, Silver, g-1.....Logan
Lowe, William F., Cor.....Salt Lake City
Lunt, J. E., r.....Nephi
Luscher, John, c-J.....Brigham
Lundstrom, Oscar Gustave, a-1.....Logan
Lundquist E. B., cor.....Smithfield
Lyle, Wesley Ben, a-2.....Logan
Mace, William Merklee, a-3.....Kanab
Machin, Florence, ho-2.....Logan
Macfarlane, Menzies, a-So.....Salt Lake City
Mackenzie, Katie, c-3.....Logan
Madsen, Brigham, g-1.....Riverton
Madsen, Ilta, m.....Logan
Madsen, Roy Mathew, a-So.....Gunnison
Madsen, Vera, ho-J.....Logan
Major, S. Jackson, cor.....Lyman, Wyo.
Manning, Amelia, g-G.....Logan
Markhaen, Orson P. hi.....Manerse
Martin, Jewell, me-1.....North Fork, Nev.
Martineau, Bryant, a-J.....Logan
Martineau, Clare, ho-F.....Logan
Martineau, Vere L., a-S.....Logan
Martineau, William Knowles, a-1.....Logan
Mathisen, Anna, ho s.....Logan
Mathisen, William Milton, a-2.....Logan

Mau, Albert Richard, a-2.....Logan
Maughan, Armenia, ho-2.....Logan
Maughan, Dan H., r.....Wellsville
Maughan, Evan, me-1.....Logan
Maughan, Howard, a-J.....Logan
Maughan, Ione, ss.....Logan
Maughan, J. A., r.....Logan
Maughan, Mrs. J. H. hk.....Logan
Maughan, Mabel, ss.....Logan
Maughan, Milton B., me-1.....Wellsville
Maughan, Mrs, P. W., hk.....Logan
Maughan, P. W., r.....Logan
Maughan, Reu Haslam, a-1.....Hyrum
Maughan, Russell Lowell, a-So.....Logan
Maycock, Mrs. E., hk.....Logan
Maycock, Raymond, a-2.....Ogden
McAlister, Florence, c-Sp.....Logan
McAlister, Irvine L., a-2.....Logan
McAlister, Wallace Snow, a-3.....Logan
McBride, Brice, ae-So.....Salt Lake City
McCheen, Lyman, r.....Morgan
McClellan, Flint C., me-1.....Payson
McClellan, Frank, me-1.....Payson
McCoy, W. J., g-Sp ss.....Salt Lake City
McCracken, Joyce, g-So.....Smithfield
McDonald, Milo, g-2.....Salt Lake City
McCulloch, Lawrence, c-1.....Logan
McCulloch, Lillian, c-3.....Logan
McGregor, Charles, g-So.....Cleveland, Ida.
McInteer, Berthus Boston, ae-2.....Garland
McGarray, Sherman, a-1.....Beaver
Mendenhall, A. J., r.....Richmond
Mendenhall, George, r.....Dayton
Merrill, Ada, ss.....Logan
Merrill, Alberto Eugene, a-So.....Smithfield
Merrill, Charles Leo, a-S.....Richmond
Merrill, Gayle, ho-So.....Smithfield
Merrill, Ralph Dermar, g-1.....Smithfield
Merrill, Guy Edward, a-2.....Richmond
Merrill, John Cardon, a-2.....Richmond
Merrill, Wendell, r.....Smithfield
Merrill, William, r.....Richmond
Miles, Hazel, ho So.....Smithfield
Miles, Joan, ss.....Smithfield
Miller, C. A., r.....Richmond
Miller, Charles Stainer, a-3.....Farmington
Miller, Eleanor, ho-2.....Farmington
Minear, Virgil Luther, a-J.....Salt Lake City
Moffat, Jennett L., ho-1.....Laketown
Mohr, Anna, ho-3.....Logan
Mohr, Andrew, g-2.....Logan
Mohr, Ernest, g-J.....Logan

Molyneaux, Alma, ss.....Logan
Molyneaux, Alma Roy, g-3.....Logan
Molyneaux, Earl, me-2.....Logan
Monson, LeRoy Franklin, c-2.....Franklin, Ida.
Monson, William Aquilla, c-2.....Logan
Montrose, Charles Ellis, g-1.....Logan
Moore, Walter Harvey, me-4.....Payson
Morehead, Preston, Thomas, a-1.....Smithfield
Morgan, Kate, ho-3.....Logan
Morgan, Samuel, a-So.....Logan
Morrell, Della, g-J.....Logan
Morrill, Rupert, ae-So.....Hinckley
Morrison, John A., a-J.....Logan
Mortimer, Kate, hk.....Logan
Moses, Wilford, c-S.....Smithfield
Morris, Edward N., c-So.....Rockland, Ida.
Morris, Mayme, ho-So.....Salt Lake City
Muir, William S., g-J.....Logan
Munford, G. M., cor.....Murray
Munk, Andrew, r.....Benson
Munk, Newell E., a-2.....King
Munro, Florence, g-Sp, ss.....Logan
Murray, Milton, r.....Mt. Sterling
Nalder, Byron Joseph, a-2.....Layton
Naegle, Heber Lehi, a-3.....Toquerville
Nebeker, Lottie D., g-Sp.....Logan
Nebeker, Phoebe, m.....Logan
Nebeker, Vilate, c-3.....Logan
Neeley, Peter Edgar, a-1.....Logan
Nelson, Anna, ss.....Logan
Nelson, Agnes, ho-1.....Logan
Nelson, Anna, ho-2.....Logan
Nelson, Anthon, g-So.....Honeyville
Nelson, Arthur, c-1.....North Logan
Nelson, Bertha, ho-1.....Tooele
Nelson, Estella, ho-2.....Logan
Nelson, Conrad, g-3.....Honeyville
Nelson, David, c-So.....Huntsville
Nelson, Enoch, g-F.....Preston, Ida.
Nelson, Eleda, ho-S.....Logan
Nelson, Etta, ho-J.....Logan
Nelson, George Arthur, a-1.....Logan
Nelson, Gus Andrew, a-So.....Logan
Nelson, Hyrum, r.....Millville
Nelson, Jennie, ss.....North Logan
Nelson, Jesse, a-1.....Ferron
Nelson, Lewis E., c-3.....North Logan
Nelson, Luella H. ho-2.....Logan
Nelson, Luenna, hk.....College Ward
Nelson, Magdalen, ho-3.....Huntsville
Nelson, Melvin Ross, c-1.....Oakley
Nelson, Katherine A. ho-1.....Huntsville
Nelson, P. M., r.....Richmond

Nelson, Myrtle, ho-2 1.....North Logan
Nelson, Mrs. W. T., hk.....Morgan
Nelson, W. T., r.....Morgan
Nesbit, Levi, a-3.....Wellsville
Newey, Aaron, me-S, ss.....Logan
Neuberger, Kate, c-1.....Logan
Nibley, Edna, g s.....Logan
Nibley, Margaret, ho-Sp.....Logan
Nicholas, A. D., r.....Brigham
Nielson, Arthur, g-F.....Pocatello, Ida.
Nielson, Arthur Oscar, a-S.....Logan
Nielson, Ashby Andrew, c-1.....Emmett, Ida.
Nielson, George, c-3.....Hyrum
Nielson, Hyrum J., g-1.....Logan
Nielson, Lavere P., c-2.....Logan
Nielson, N. K., r.....Springville
Nielson, Pearl, ho-So.....Logan
Nielson, Rowena E, ho-1.....Emmett, Ida.
Nielson, Vera, ho-2.....Logan
Nielson, William, c-2.....Hyrum
Nielson, Winnie, ss.....Hyrum
Nisson, Clarence Wilford, c-2.....Logan
Noble, George Smith, g-1.....Smithfield
Nokes, Charles M., hi.....Riverton
Norr, Lorenzo, me-1.....Logan
Norman, E. J., r.....Paradise
Norman, Edward, r.....Paradise
Nuttal, Leonard Grover, a-2.....Logan
Nyman, Ernest Leslie, a-1.....North Logan
Nyman, James H., me-1.....North Logan
Nyman, Mary Baker, c-Op.....Logan
Nyman, Teenie, ss.....North Logan
Obray, Georgina, ss.....Paradise
Odell, Joseph Conrad, a-1.....Logan
Ogden, Laura E., ho-1.....Richfield
Ogden, Junius F., a-So, ss.....Richfield
Oldham, Edward P., r.....Paradise
Oldham, Mabel, ss.....Paradise
Olsen, Daniel K., a-2.....Ephraim
Olsen, Earl, r.....Metropolis, Nev.
Olsen, Emily, ss.....Paradise
Olsen, Evalyn, ss.....Bear River City
Olsen, Heber Levi, a-1.....Logan
Olsen, Joseph W., a-S.....Crescent
Olsen, Harry John, a-Sp.....Wellsville
Olsen, Pearl, c-2.....Logan
Olsen, Serence, hi.....Price
Osmond, Charles Anson, a-3.....Logan
Osmond, James George, c-S.....Logan
Oyler, Joseph, a-3.....Garland
Oyler, Leo., me-2.....East Garland
Owen, Abbi, hk.....Logan
Owens, Silas S., a-2.....Paragoonah

Owen, Cyril B., a-3 ..... Wellsville
Pace, Alta, ho-1 ..... Loa
Pace, Barlow, c-3 ..... Loa
Pace, Carl, c-2 ..... Loa
Pack, Herbert John, g-J ..... Woods Cross
Pack, R., r ..... Richmond
Paddock, Harve, c-2 ..... Wisdom, Mont.
Palmer, Alfred Allen, c-So ..... Logan
Palmer, E. W., r ..... North Logan
Palmer, Herman, g-2 ..... Farmington
Palmer, Valentine, c-1 ..... Logan
Park, Libbie, ho-3 ..... Logan
Parker, Sarah, hk ..... Logan
Parker, R. A., r ..... Hyde Park
Parkinson, Ezra Benson, c-J ..... Logan
Parkinson, Glenn, g-3 ..... Logan
Parkinson, Lillian, hk ..... Hyrum
Parkinson, W. C., r ..... Hyrum
Parry, Vaughan, ss ..... Logan
Passey, E. J., cor ..... Paris, Ida.
Parson, I. B., r ..... Twin Falls, Ida.
Pearl, Ernest H., r ..... Smithfield
Pearson, Alex, r ..... Peterson
Peart, Clyde, me-3 ..... Logan
Peart, J. Kenneth, a-So ..... Woods Cross
Peart, Margaret, ho-4 ..... Logan
Peebles, Irving, c-2 ..... Oxford, Ida.
Pederson, N. Alvin, g-Sp, ss ..... Logan
Pence, John Otte, c-J ..... Mountain Home, Ida.
Pendleton, Bethsheba, c-1 ..... Logan
Perkes, J. W., r ..... Hyde Park
Perrine, I. B., r ..... Twin Falls
Perry, Nina, ss ..... Ogden
Perry, Ruby, hk ..... Logan
Peters, John W., c-S ..... Brigham
Peterson, Margaret, ss ..... Brigham
Peterson, Mrs. Alice, ho-S ..... Logan
Peterson, Anton O., a-2 ..... Logan
Peterson, Caroline, ho-3 ..... Logan
Peterson, C. E., r ..... Mink Creek
Peterson, Canute, ss ..... Logan
Peterson, Elof Roger, me-1 ..... Huntsville
Peterson, Esther, ss ..... Hyrum
Peterson, Florence, hk ..... College Ward
Peterson, John H., a-J, ss ..... Smithfield
Peterson, Hugh C., g-3 ..... Logan
Peterson, Verne, a-J ..... Glenwood
Peterson, Vincent, c-1 ..... Logan
Peterson, LaVoyle Delilah, ho-1 ..... Logan
Peterson, Leroy, r. ..... Marion
Peterson, Lillie, ss. ..... Smithfield
Peterson, Lorenzo, r. ..... Hyde Park

Peterson, L. K., r. ..... Huntsville
Peterson, Nettie, ho-So ..... Logan
Peterson, N. C., r. ..... Logan
Peterson, Mrs. Parley E. hk ..... Logan
Peterson, Othelia, g-Sp, ss ..... Logan
Peterson, Ray H., g-J ..... Logan
Peterson, Vadal, g-3 ..... Huntsville
Peterson, Vernon Russell, a-2 ..... Logan
Peterson, William A., a-Op ..... Logan
Peterson, William, ss ..... Logan
Peterson, Willard L., ss ..... Mendon
Petty, Charles B., cor ..... St. George
Petty, Frank Henry, a-J ..... Rockville
Petty, Mrs. Bertha, ho-3 ..... St. George
Picot, Alfred G., c-3 ..... Logan
Plant, Henry T., Jr., g-G ..... Richmond
Poulson, Fred N., g-Sp ..... Salt Lake City
Pond, Brigham, r ..... Lewiston
Pond, Hazel, g-Sp ..... Lewiston
Pond, Letho, a-3 ..... Logan
Pond, Lewis S., r ..... Thatcher
Pond, Horace Raymond, a-3 ..... Lewiston
Pond, William Leon, g-So ..... Lewiston
Porter, Charles Walter, ss ..... Logan
Porter, M. Rich, cor ..... Ogden
Porter, Omni A., c-1 ..... North Logan
Porter, Ralph Orlando, g-S ..... Porterville
Poulson, Fred N., ss ..... Salt Lake City
Poulson, J. r ..... Richfield
Powell, John F., me-2 ..... Sunnyside
Prasser, William D., ss ..... Salt Lake City
Prather, Carlton K., m2-3 ..... St. Johns, Ariz.
Preston, Clayton, g-1 ..... Logan
Price, Bertha M., hO-1 ..... Idaho Falls
Price, Lloyd L., ss ..... Fairview
Price, May, ho-2 ..... Wellsville
Price, Robert L., a-J ..... Wellsville
Price, Sterling Eliott, a-J ..... Provo
Priday, Sidney, me-2 ..... Logan
Prosser, W. D., g-Sp ..... Logan
Purser, John, r ..... Hyde Park
Quayle, John T., me-1 ..... Logan
Quayle, Joseph, me-1 ..... Logan
Quayle, William L., g-G ..... Logan
Quinney, S. Joseph, c-So ..... Logan
Quinney, Mrs. Joseph, Jr., hk ..... Logan
Ralph, Leonard T., c-1 ..... Rockland, Ida.
Ralph, Virgil, r ..... Rockland, Ida.
Ranzenberger, John, r ..... Providence
Rasmussen, A., r ..... Morgan
Rasmussen, William H., hi ..... Fillmore
Ratcliffe, Robert Ross, a-S ..... Provo

Raymond, Loila, ss.....Smithfield
Raymond, William Goodwin, a-2.....Smithfield
Raymond, Mosella, c-3.....Smithfield
Raymond, W. G., r.....Smithfield
Rawlings, W. G., g-Sp.....Salt Lake City
Rawlings, William S., ss.....Salt Lake City
Redding, C. G., r.....Corinne
Reed, Harry Slater, a-J.....Ogden
Reese, A. J., r.....Benson
Reese, Ether N., g-Sp, ss.....Cove
Reese, Sapronia, ss.....King
Reese, Naomi, g-Sp.....Logan
Rees, Charles William, a-J.....Coalville
Reese, Sarah L., ho-1.....Benson
Reese, Wanda, ss.....Benson
Reese, William G., a-2.....King
Reilley, Evelyn, ss, g-Sp, cor.....Salt Lake City
Reynolds, D. J., r.....Malad
Reynolds, Katie, ho-3.....Logan
Rhees, George Herbert, a-2.....Ogden
Rhodes, Vernon, me-1.....Garland
Ricks, Ezra, r.....Benson
Ricks, L. C., r.....Logan
Rich, Abel S., cor.....Paris, Ida.
Rich, Heber Charles Chase, a-1.....Logan
Rich, Oscar S., r.....Metropolis, Nev.
Rich, Roscoe Clarence, a-1.....Logan
Rich, R. H., r.....Morgan
Rich, Walker Smith, a-Op.....Logan
Rich, William L., r.....Paris, Ida.
Richards, Carrie, ss.....Logan
Richards, Leo M., r.....Logan
Richards, H. P., r.....Virginia, Ida.
Richards, W. W., r.....Paris, Ida.
Richardson, Ivie, g-So.....Logan
Richardson, Jacob Z, me-3.....Logan
Richardson, Lester A, a-S.....Ogden
Riciger, Frank, r.....Rawlins
Rigby, Parley, c-2.....Newton
Riggs, John E., me-2.....Kanab
Rinderknecht, Jacob, r.....Providence
Riter, Levi R., g-1.....Logan
Riter, Samuel Waldo, c-1.....Logan
Robinson, A. Dee, r.....Fillmore
Robinson, G. E., r.....Richmond
Robinson, Julian LeRoy, a-1.....Richmond
Rose, Clarence, a-1.....Logan
Rose, Guy, g-Sp, ss.....Logan
Rose, Raymond Daniel, c-1.....Logan
Rosengreen, Ruth, ho-1.....Logan
Roskelley, Druzilla, ho-1.....Smithfield
Roskelley, Frances, ho-1.....Smithfield

Roskelley, James E., a-2.....Smithfield
Roskelley, James, r.....Smithfield
Roskelley, Maud, ss.....Smithfield
Roskelley, Olive, ho-3.....Smithfield
Roskelley, Richard B., c-2.....Smithfield
Rowe, Clare S., ho-1.....Mendon
Rowland, J. W., r.....Logan
Ruchti, William F., a-1.....Logan
Sadler, Ernest V., cor.....Duchesne
Sadler, Vincent A., a-G.....Salt Lake City
Salisbury, George W., r.....Hyde Park
Salmon, Grace, ss.....Coalville
Sampson, Jay Milton, a-1.....Mammoth
Sammons, Neil F., c-So.....Logan
Sammons, Russell, c-2.....Logan
Sanders, Earl, me-1.....Collinston
Scholes, Caroline, ss.....Logan
Scholes, Mrs. A. B., hk.....Logan
Schmalz, Frederick, Forestry, a-1.....Ogden
Schweitzer, Howard Bruce, a-S.....Bingham
Schweitzer, George Leroy, a-J.....Bingham
Scott, Laree, ho-1.....Logan
Seamons, George W., r.....Hyde Park
Seegmiller, Daniel Adam, a-3.....St. George
Seegmiller, George, a-3.....St. George
Sessions, Charles E., me-3.....Syracuse
Sessions, S. Elveras, a-1.....Marion, Ida.
Sevey, Blaine, a-1.....Panguitch
Sevey, Claude, a-1.....Richfield
Seymour, Gladys, g-Sp.....Kamas
Shaw, Bessie, a-Sp.....Logan
Shackelford, William Jeffery, a-3.....Salt Lak eCity
Shade, A. W., r.....Hinkville
Sharp, John Ajax, a-So.....Vernon
Shaw, Bessie H., ss.....Providence
Shaw, Harry, a-1.....Paradise
Shaw, W. H., r.....Paradise
Shipley, William C., ss.....Franklin, Ida.
Showell, Thomas W., me-1.....Showell
Showalter, James Cornilous, a-1.....Panguitch
Shurtliff, A. T., r.....Salt Lake City
Shurtliff, Mrs. Arthur F., hk.....Salt Lake City
Shurtliff, Frank E., ae-So.....Ogden
Simmons, Earl E., me-1.....Payson
Simmons, A. E., r.....Amelia, Nev.
Singleton, C. L., r.....Hooper
Singleton, Cecile, ho-3.....Ferron
Singleton, Lawrence W., r.....Hooper
Sjostrom, Joseph Emil, c-3.....Logan
Skinner, Joseph F., a-J.....Logan
Sloan, Mrs. Pearl C., hk.....Logan
Smart, Melvin S., c-S.....Logan

Smart, Thomas Lawrence a-1 ..... Roosevelt
Smith, A. J., r ..... Draper
Smith, Dal, r ..... Lewiston
Smith, Donald, c-1 ..... Logan
Smith, Golden, r ..... Logan
Smith, Leal, me-1 ..... Logan
Smith, Frank Fowles, a-1 ..... Vernal
Smith, Isaac Edward, a-3 ..... Huntsville
Smith, J. M., hi ..... Draper
Smith, James O., hi ..... East Mill Creek
Smith, Jennie, c-3 ..... Logan
Smith, Leona, ho-1 ..... Logan
Smith, Leslie A., g-S ..... Logan
Smith, Marion, ho-2 ..... Logan
Smith, Owen W., me-1 ..... Logan
Smith, Raymond, a-So ..... Logan
Smith, Ray Fred, a-1 ..... Murray
Smith, Robert M., r ..... Logan
Smith, Mrs. Robert M., hk ..... Logan
Smith, Rose, ss ..... Brigham
Smith, Theron, r ..... Logan
Smith, William Leroy, c-S ..... Logan
Smith, Willis A., ss ..... Preston, Ida.
Smurthwaite, Ada L., ho-1 ..... Logan
Smurthwaite, Florence, g-Sp ..... Logan
Smurthwaite, Harry G., ss ..... Logan
Smurthwaite, Mrs. Harry G., hk ..... Logan
Snow, Cedric R., a-1 ..... Salt Lake City
Snow, Emma, ss ..... Teasdale
Snow, Hazel M., ho-2 ..... Teasdale
Snow, James C., hi ..... Fairview
Snow, Joseph Hansen, a-J ..... Kingston
Sorenson, Aaron, r ..... Logan
Sorenson, Eulalia, ss ..... Mendon
Sorenson, John C., r ..... Logan
Sorenson, John P., a-S ..... Logan
Sorenson, Charles J., r ..... Logan
Sorenson, Mrs. Elsie P., hk ..... Logan
Sorenson, Willard H., r ..... Logan
Southworth, Walter, g-F ..... Logan
Spande, Mabel, ho-2 ..... Logan
Spencer, Bessie, ss ..... Kanab
Spencer, Frank D., ae-So ..... Salt Lake City
Sperry, George A., ss ..... Nephi
Sperry, George A., cor ..... Nephi
Squires, Katie, ho-2 ..... Logan
Starley, Claude, a-1 ..... Fillmore
Staker, John B., a-J ..... Annabella
Standing, I. R., r ..... Collinston
Standley, J. M., r ..... Logan
Stanley, Newell, r ..... Logan
Stay, Joseph Charles, hi ..... Calder

Stayner, Ralph J., cor.....Garland
Steams, F. L., r.....Corinne
Steams, Harold J., ss.....Logan
Steed, Gerold M., a-So.....Farmington
Steed, George, r.....Clearfield
Steed, Chas. E., r.....Clearfield
Stephens, Edwin W., a-J.....Salt Lake City
Stephens, Bruce Stevens, a-1.....Holden
Stephens, William Angus, a-2.....Holden
Stephenson, Mattie, g-Sp.....Holden
Stearns, Harold J., g-Sp.....Salt Lake City
Stevens, LeRoy Alfred, c-S, ss.....Logan
Stevenson, Simon, r.....Holden
Stewart, Archibald Jardine, c-1.....Logan
Stewart, Eugene Fitzgerald, a-So.....Logan
Stewart, George, a-S.....Tooele
Stewart, James Haslam, g-G.....Wellsville
Stewart, Roy, ss.....Nephi
Stewart, Royal Angus, a-So.....Logan
Stewart, Willie H., g-So, ss.....Logan
Stewart, Walter, c-1.....Wisdom, Mont.
Stirland, William Charles, a-1.....Providence
Sterling, Joseph, a-1.....Leeds
Stock, Mrs. J. W., hk.....Swan Creek
Stock, J. W., r.....Swan Creek
Stoddard, David I., g-J.....Logan
Stoddard, Walter B, me-1.....Hooper
Stone, William J., cor.....Ogden
Stucki, Alfred, a-J.....Santa Clara
Tanner, Leroy, a-F.....Tooele
Tanner, Mrs. Lillas S., hk.....Whitney, Ida.
Tanner, William, r.....Whitney, Ida.
Tarbet, Agnes, c-3.....Logan
Tarbet, Florence, ss, m.....Logan
Tarbet, Joseph, r.....Logan
Taylor, J. Marlow, r.....Salt Lake City
Taylor, Leonard Sharp, g-3.....Baker City, Ore.
Taylor, George Merle, a-S.....Provo
Taylor, Thomas A., me-1.....Centerville
Telford, J. Lafayette, a-F.....Lewiston
Telford, S. R., r.....Richmond
Thain, Mary Aldyth, ho-2.....Logan
Thatcher, Ethel, g-Sp.....Logan
Thatcher, Patience, m.....Logan
Thatcher, Nathan David, a-3.....Logan
Theurer, Alma, r.....Logan
Theurer, Herman, r.....Logan
Thirkill, Frank, c-2.....Soda Springs, Ida.
Thomas, James M., cor.....Ogden
Thomas W. Preston, cor.....Ogden
Thoresen, Eliza, c-2.....Logan
Thornley, Lilla Maud, ho-1.....Logan

Thornley, Will John, a-1.....Kaysville
Thompson, W. G., r.....Whitney, Ida.
Thurston, Clarence, me-1.....Morgan
Thurston, S. B., r.....Hyde Park
Thurston, Stephen, r.....Hyde Park
Tibbetts, Ira, r.....Providence
Tibbetts, Marion, r.....Providence
Titensor, Earl F., g-S.....Cove
Titus, A. C., r.....Topeka, Kansas
Toolson, Richard Harper, g-3.....Smithfield
Toombs, J. Courtleigh, c-1.....Logan
Toombs, L. Lornell, ho-1.....Logan
Toombs, Malverne Haws, a-1.....Logan
Tovey, David Edwin, a-1.....Logan
Tovey, William D., c-1.....Briston, Mont.
Towers, Robert H., cor.....Mammoth
Transtrum, Chester, ae-2.....St. Charles
Traughber, Mrs. W. E., hk.....Salt Lake City
Tripp, W. R., r.....Richmond
Tunks, Samuel Van, c-J, ss.....Ovid, Ida.
Turner, George Albert, a-1.....Logan
Ure, Leona, ho-J.....Salt Lake City
Ure, Elizabeth H., cor.....Grantsville
Vanesse, Joseph Andrew, a-2.....Smithfield
Vickers, Wallace J., g-S.....Nephi
Voorhis, P. L. Van, ae, F.....Salt Lake City
Wagoner, John D. Van, c-Sp.....Provo
Wagstaff, A. J., r.....Murray
Wahlen, Julius Oliver, me-1.....Logan
Wall, Mary Jessie, ho-F.....Venice
Wallace, Jonathan A., g-2.....Hyrum
Wallace, J. A., r.....Garland
Waldon, Mrs. Helena, hk.....Morgan
Waldon, Joseph T., r.....Morgan
Waldon, Levi, r.....Morgan
Walsh, Edith M., ho-F.....Farmington
Wansgaard, Ernest, g-Sp.....Huntsville
Wangsgaard, Louis B., a-J.....Huntsville
Ward, J. A., cor.....Brigham
Wardle, Junius, a-1.....Sandy
Warner, Harry C., me-1.....Peterson
Warner, Joseph G., Jr., r.....Logan
Watkins, Ethel, ho-3.....Logan
Watts, Byron, c-1.....Smithfield
Watts, Joseph Henry, a-2.....Smithfield
Weaver, Ola Mae, c-1.....Wellsville
Weiler, Vera, ho-J.....Salt Lake City
Webb, Heber Jarvis, a-S, ss.....St. George
Welch, Joseph Preston, a-J.....Paradise
Welch, John, r.....Paradise
West, A. M., r.....Tremonton
Westover, Albert Haven, c-1.....Trenton

Westover, L. B., r.....Trenton
Westover, Magdalen, ho-1.....Logan
Wheeler, Henry Calvin, a-F.....Fielding
White, James LeRoy, a-1.....Farmington
White, John Edwin, a-J.....American Fork
Whitear, Charles B., me-1.....Peterson
Whitesides, Lewis Paul, a-1.....Layton
Whittle, F. H., r.....Richmond
Whittemore, Harold, cor.....Blaine
Whitworth, Jesse J., a-1.....Richmond
Widmer, Samuel E., me-1.....Geneva, Ida.
Wiebe, Edward Cornelius, a-1.....Logan
Wild, Raymond, me-1.....American Fork
Willis, Edna L., g-Sp.....Salt Lake City
Williams, Alma, r.....Hyrum
Williams, Nephi, hi.....Beaver
Williams, Robert Henry, me-1.....Clyde, Ida.
Williams, Howells N., g-2.....Malad, Ida.
Willie, Pearl, hk.....Mendon
Wilmore, Mrs. S. J., hk.....Logan
Wilson, Esther, ss.....Hyrum
Wilson, John, a-S.....Eden
Windward, Abraham, r.....Whitney, Ida.
Winn, William L., r.....Smithfield
Witbeck, Alden M., me-3.....Vernal
Witbeck, William Erickson, a-3.....Vernal
Wood, C. S., r.....Huntsville
Wood, Frances, ss.....Logan
Wood, F. W., r.....n. Huntsville
Woodbury, George Jeremiah, a-J.....St. George
Woodland, Orville William, a-2.....Logan
Woodland, Noah L., a-2.....Richmond
Woodsire, Jean, ho-So.....Logan
Woodside, Jean, ho-So.....Logan
Woodside, Charles, c-So.....Logan
Wool, E. M., r.....Montpelier, Ida.
Woolf, J. W., r.....Salt Lake City
Woolf, John A., r.....Metropolis, Nev.
Woolf, William L., a-Sp.....Salt Lake City
Woolley, Ida, ho-3.....Logan
Woolf, Ruby, ho-So.....Logan
Woolley, Olive, g-1.....Logan
Woolley, William G., a-S.....Salt Lake City
Working, D. W., r.....Denver, Colo.
Worley, William Raymond, c-Sp.....Logan
Worlton, James T., ss.....Salt Lake City
Worlton, J. T., g-Sp.....Salt Lake City
Wright, Luke M., g-Sp.....Ogden
Wright, Coulsen, c-1.....Bennington, Ida.
Wright, Clarence E., c-J.....Ogden
Wright, William J., hi.....Coalville
Writter, Raymond, r.....Milton
Wyatt, Ralph, a-J.....Wellsville

Yost, Fred, me-1 ..... Providence
Young, Cora, ho-1 ..... Logan
Young, Mrs. Ella D., ho-1 ..... Vernal
Young, George Spencer, a-1 ..... Logan
Young, George S., r ..... Driggs, Ida.
Young, Hattie Page, c-3 ..... Vernal
Young, Leo D., me-1 ..... Moffat
Young, Joseph Watson, a-1 ..... Moffat
Yorgensen, Lulu, ho-2 ..... Smithfield
Younkers, E. E., r ..... North Logan
Younkers, Mrs. D. T., hk ..... North Logan
Younkers, D. T., r ..... North Logan
Younkers, Stanley Wayne, a-1 ..... North Logan
Zamboni, George Angelo, a-Op ..... Salt Lake City
Zwahlen, Joseph, r ..... Feron
Zollinger, W. R., r ..... Providence
Zundel, Mrs. May, hk ..... Logan

SUMMARY BY SCHOOLS.

		Agr.	H. Ec.	Com.	M. A.	S. Sci.	Music	Ag. E.	Total	Grand Total
COLLEGE COURSES	Graduates	2	...	...	...	10	...	...	12	....
	Seniors	30	11	9	...	11	...	...	61	....
	Juniors	46	19	8	...	11	...	...	84	....
	Sophomores ..	32	20	11	1	10	...	6	80	....
	Freshmen	13	12	4	1	5	9	3	46	....
	Specials	8	...	2	...	45	...	...	55	....
	Totals.....	132	62	34	2	92	9	9	...	339
HIGH SCHOOL	Third Year ..	39	18	27	7	16	...	...	107	....
	Second Year .	39	33	25	12	13	...	3	125	....
	First Year ...	54	29	52	27	14	...	2	178	....
	Optionals	...	...	6	1	2	...	...	10	....
	Totals.....	132	80	110	47	45	...	5	...	319
SHORT COURSES	Second Year .	28	...	...	1	...	...	...	29	....
	First Year ...	43	5	4	12	...	...	...	64	....
	House K. C...	...	62	...	...	...	...	...	62	....
	Round-up	287	...	...	...	...	...	...	287	....
	Hort. Insp. ..	19	...	...	...	...	...	...	19	....
	Correspond. .	19	2	15	...	11	...	1	48	....
	Totals.....	396	69	19	13	11	...	1	...	509
SUMMER SCHOOL										150
		659	211	163	62	148	9	15	...	1417
GRAND TOTALS	Less repeated									37
	Total Registration									1380

SUMMARY BY COURSES.

Agriculture	659
Home Economics	211
Commerce	163
Mechanic Arts	62
General Science	148
Music	9
Agricultural Engineering	15
Summer School	150
	1417
Names Repeated	37
Total Registration	1380

SUMMARY BY YEARS.

Graduates	12	
Seniors	61	
Juniors	84	
Sophomores	81	
Freshmen	46	
Specials	55	
Total of College Grade		339
Third Year	107	
Second Year	125	
First Year	177	
Optionals	10	
Winter Course	509	
Agriculture	396	
Home Economics	69	
Commerce	19	
Mechanic Arts	13	
General Science	11	
Agricultural Engineering	1	
Total High School and Winter Course		928
Summer School		150
		1417
Less names repeated		37
Total Registration		1380

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